

Importance of Behavior in Health Status

Jose Ramon Toro Lopez

Independent Researcher, Sevilla, Spain

ABSTRACT

Objective: Otto Warburg at the beginning of the 20th century around 1931 determined that the cause of cancer, in addition to being the consequence of an unphysiological diet, was also related to an unphysiological lifestyle; our objective in this study is to demonstrate the importance of lifestyle behavior in its relationship with the disease.

Methodology: This is a systematic literature review where all searches were conducted in English between the years 2019 and 2023 (both included) related to articles that identified any special characteristic that could occur between a behavior and a disease; for this purpose, search engines such as Pubmed, Cuiden and VHL Regional Research Portal were used.

Results: The results of our study seem to confirm the importance of behavior in the development, maintenance or recovery of a disease; a factor to be taken into account especially in diseases such as cancer.

Conclusion: We have seen how health is significantly influenced by the existence of certain behavioral patterns; we must pay special attention to those attitudes that we have maintained throughout our lives and that have affected us emotionally because sooner or later they could also end up affecting our organism.

*Corresponding author

Jose Ramón Toro Lopez, Independent Researcher, Sevilla 41500, Spain.

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Introduction

The University of Murcia (Spain) in relation to the definition of lifestyle based on the one made by the WHO in 1999 where in the third paragraph it says the following: The Glossary of health promotion (WHO, 1999) defines the lifestyle of a person as that “composed of their habitual reactions and behavioral patterns that have developed during their socialization processes. These patterns are learned in the relationship with parents, peers, friends and siblings, or through the influence of the school, media, etc. Such behavioral patterns are continuously interpreted and tested in various social situations and, therefore, are not fixed, but are subject to modification” [1].

From an early age we begin to observe the environment where we find ourselves assuming and being influenced by those ways of proceeding that the people around us have, this is usually done through what is known as mirror neurons, a type of neurons that have been found in the inner prefrontal gyrus and that not only integrate perception in the planning and execution of an action but also act as a neural mechanism that supports a wide range of cognitive functions having an important role in motor learning in addition to the recognition of actions and intentions [2]. Such as those coming from our parents, siblings, friends, social networks or media; situations that sooner or later will end up conditioning our way of being and our behavior; these types of situations

influenced by the nature of these stimuli will give rise to a series of explicit and implicit attitudes, where the latter will guide a type of behavior that will possibly end up determining the preferences that we will have at that moment [3].

Obviously, this attitude will depend on what we have perceived in the first years of our life, since the experience we have acquired up to that moment will have been influenced by the environment in which we have lived and where we are, which could facilitate that in the worst case and if we do not have strong convictions, we could possibly end up developing those attitudes that society expects us to have in order to face certain situations and that although they may be appropriate for the society in which we find ourselves, they could not always be the most suitable for us. When we relate behaviors to issues such as health we should take into account that they will be conditioned by different biological, psychological and/or social processes, therefore depending on the importance we give to this information and taking into account the context in which we are integrated, it will be easier for us to choose different options and resources related to health issues; in fact, when we get sick, depending on the disease in question, sometimes we must recognize that a situation may arise that could not only change the life of the person suffering from the disease but also the life of the different social groups around them, as in the case of the family, with the possibility of fostering stigmatization and even discriminatory situations [4]. patterns that will also be influenced by aspects such as spirituality and life satisfaction; psychological factors that could also be related to the health behavior itself [5].

Methodology

Otto Warburg in the early twentieth century around 1931 determined that the cause of cancer, besides being the consequence of an antiphysiological diet, was also related to an antiphysiological lifestyle [6]. In this study, we try to demonstrate the importance of behavior when suffering a disease, and not only in diseases such as cancer but any other that could alter our state of health.

Sources of information

This is a systematic literature review where all searches were conducted in English between the years 2019 and 2023 (both included) related to articles that identified any special characteristic that could occur between a behavior and a disease; search engines such as Pubmed, Cuiden and VHL Regional Research Portal were used for this purpose.

The keyword used in all search engines were: behavior in the disease, for the search related to behavior and Media and disease, for those searching how the media could come to influence behaviors.

Selection criteria

Pubmed: behavior in the disease: 218.486

Pubmed: Media and disease: 28.080

Cuiden: behavior in the disease: 17

Cuiden: Media and disease: 510

Portal Regional de la BVS: behavior in the disease: 122.120

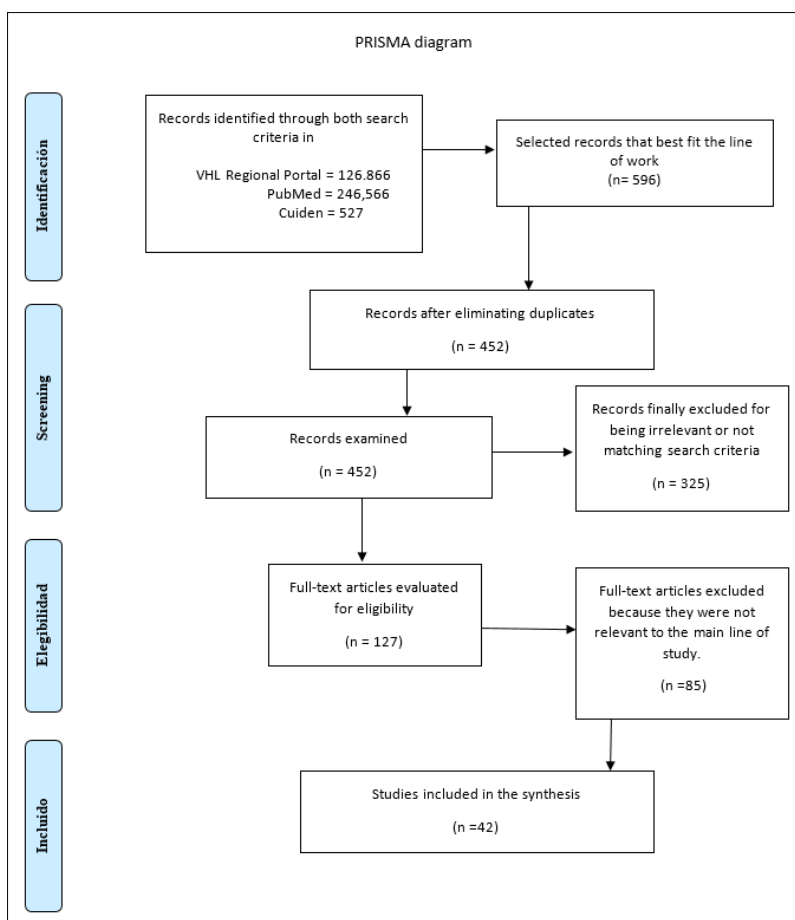
Portal Regional de la BVS: Media and disease: 4.746

Selection of studies

Given the large number of results obtained, it was decided to review the first 100 that contained the two words selected, of which after being reviewed and checking that they coincided with the line of study, those that were considered to be more in line with the line of work were selected; subsequently, those others that were found to be duplicates or that the information they presented was practically the same were eliminated.

Analysis of references

In a first reading, the importance of the information provided in terms of the different relationships between the disease and the influence that a certain type of behavior could have on it was sought in the general context; in the same way, special attention was paid to the possible influence exerted by the media in their coping with the disease. (Prism diagram).



Results

Mass media

One of the elements that most influence us when it comes to behaving in a certain way in a “social” situation is usually the mass media, which through the use of descriptive norms that could be true or false depending on whether or not they correspond to the reality they are trying to expose, seem to generate an indirect influence on behaviors related to health prevention, nor should we forget the importance of the different types of roles related to the different types of behavior that will develop as a result of all this [7]. The advantage of this type of media is, on the one hand, that in a certain sense they seem to have encouraged consumers to obtain information related to health issues; however, on the other hand, there is the problem that the very nature of the networks and their scarce regulation tend to cast doubt on the validity of some of the information that more or less frequently ends up being shared [8]. In spite of everything, we must bear in mind that the media are not always negative, sometimes they are important. In certain places where these communication systems are not as widespread as in our society, it has been necessary to develop other types of systems that were effective as a mechanism to raise awareness in the community at a given time, as happened with the problem of malaria in the municipality of Banmawk, Sagaing region (Burma) where, in order to reach people living in villages endemic to the disease, loudspeakers were used with the intention of improving the effectiveness of the announcements, the results demonstrated their effectiveness with a reduction in morbidity [9]. On the other hand, sometimes and despite being supported by most physicians, when there is a need to develop vaccination campaigns there are often controversial situations related to their safety and usefulness because of the appearance in the traditional media of critical opinions about the obligation or not of immunization, this information seems to favor the fact that some parents share their fears and concerns about vaccines and their possible side effects [10].

Behaviors or habits

Health-related behaviors such as physical inactivity, low fruit and vegetable intake, smoking, alcohol consumption or inadequate sleep are known to be significant predictors of unhealthy outcomes; a study conducted with men and women related to alcohol and tobacco consumption showed that in addition to the known risk already represented by tobacco, alcohol was also presented as a high risk in the group of women; the conclusion reached was that in those behaviors where health is the priority objective, specific patterns such as sex should be taken into account when designing intervention strategies of this type [11]. In fact, and especially in the case of women, it was also possible to demonstrate a higher risk related to alcohol consumption compared to women who breastfed their children; however, it was also observed that depression was twice as frequent among women who breastfed their children; Curiously, it was concluded that, in general terms, pregnant women (despite drinking alcohol) had better health than those who breastfed, the problem is that many of them could not stop drinking, thus developing unfavorable behavior and therefore a risk that could negatively affect both maternal and fetal health [12].

The study of smoking-related behaviors has been one of the most widespread challenges in all countries, one of its objectives has been to understand the status quo of smoking in order to change the behavior pattern that was related; in a study conducted in Tianjin (China) the results established two important aspects, one a general increase in smoking especially among women and the other that the average age to start smoking continues to be lower and lower [13]. As for alcohol, we know that its excessive consumption is

dangerous, especially when driving, but it is also important to take into account aspects such as lifestyle and demographics, which also seem to be associated with alcohol consumption [14].

Behavior in young people

One of the most important behaviors in our young people is the importance of the hours of sleep needed to maintain a good state of health; it has been shown that sleeping between 8 and 9 hours favors the possibility of developing less risk in the generation of sociological alterations [15]. Another aspect that seems to interfere is the economic level of the family; it has been shown that low family income has a significant impact on the health of children and adolescents [16]. On the other hand, another important problem is the time they spend communicating through social networks, which often leads to problematic situations that could facilitate the emergence of predispositions that could at some point contribute to the development of a series of possible addictive behaviors related to addictive biases related to social networks, especially those associated with the Internet [17].

We know that negative thoughts have never been good for health, a study related to the dental health of young people determined that this type of behavior would be preceded by a greater daily impact on their oral health; the study concluded that the situations of anxiety that often accompany them could end up affecting their daily life and psychological well-being [18].

Another study related to children’s visits to the dentist showed that the total number of hours spent in front of electronic screens and related to violent media, showed anxiety problems and behaviors that correlated with the total number of hours spent exposed to such screens; with respect to sex, they also curiously found that boys showed significantly greater exposure to violent media than girls [19].

Another problem is childhood obesity rates, which have increased over the years and are considered one of the most serious public health problems of the present century; Knowledge about healthy eating in isolation seems to be insufficient to practice a healthy diet so it is important to combine the transmission of knowledge with training in specific skills such as self-regulation strategies [20]. It should be noted that behavioral changes are very important for a good state of health, it has been shown that children diagnosed with hypoplastic left heart syndrome at the age of 6 years already had difficulties in areas related to adaptive behavior, ie some behavioral problems that would end up influencing their quality of life and functional status. (Goldberg CS 1 et al.) [21].

Another important influence that influences the behavior of our young people are grandparents because normally and in this society in which we live they are a key source of care for grandchildren, unfortunately they are often marginalized in research despite the great influence they exert on their emotional development and their future, unfortunately at present little is known of that important influence they exert on them given the few data that exist [22].

Patient-related behavior

One of the objectives at the international level is to establish behaviors that minimize the use of restrictive practices related to mental health in hospitalized patients; it has been proven that support plans on positive behavior favor improvements at this level [23]. In fact a change of behavior in favor of learning that favors positive self-control could improve the health status and quality of life of those suffering from chronic diseases [24].

We cannot always control behaviors, there are diseases that are precisely characterized by uncontrolled movements as in the case of Huntington's disease characterized by uncontrolled movements, clumsiness, imbalance problems and rapid eye movements [25]. For this reason, it is important that when we have the possibility to generate these changes we take into account the importance that could represent the change of behavior that we generate when we suffer from any disease or we are in a situation where the state of health could be compromised; As happens for example in the case of sedentary lifestyle, where in a study conducted with pregnant women related to their mental health, it was possible to observe the influence exerted by the trimesters, as a result of the study, a change in their behavior was recommended and a reduction in the mental anguish that this situation produced in them was observed [26].

In patients who have overcome a stroke, behavioral change is important, but few seem to make changes in their lifestyle [27]. However, several studies have shown that negative mental health favors behavior that is dangerous to health, in addition to presenting a higher risk of mortality [28]. Although the reality is that when we become ill and we are told that the lifestyle we are leading may be related in some way to our disease, we tend to think that this has nothing to do with it, so there is no need to change; however, when we consider that the problem is serious, emotions such as fear seem to facilitate that this change in health may come about [29].

There are experimental studies that tell us how cancer patients often experience multiple emotional distress, particularly the fear of death. Studies have been conducted in mice with xenograft pancreatic cancer where it has been shown how stressful situations due to fear in tumor-bearing mice favored the appearance of certain types of behaviors similar to depression, while an increase in tumor growth was also observed [30].

Another study conducted in adult men with prostate cancer aimed to identify whether specific aspects of health literacy were associated with their quality of life, and found a decrease in fear of disease progression due to an increase in communication skills, concluding that some aspects of health literacy could have a positive influence on this type of patient [30].

This type of situation tends to occur more frequently because of the treatments themselves and the concern about what would happen to their families; in those patients who presented more severe physical symptoms, more anxious and depressed, a worsening and therefore a lower quality of life could be appreciated. In this type of situation, worry, cognitive enumeration and anticipation of possible negative events in the future are associated with the lack of regulation of the autonomic nervous system, this situation may have implications for the immune system, and a follow-up conducted on phobic fear seems to have demonstrated a disruption of the normal circadian increase in natural killer cells known as NK cells [30].

It is precisely in this early phase where the parents' education will play a key role and where the mother's education will mainly help the baby to have a good start in his or her future life, since the influence of bad behavior related to children's health may not be evident until later in their lives [31]. However, and continuing with the importance of the baby, we should not forget that normally, in addition to a mother, there is also usually a father, and it has been shown that men and women are more likely to generate positive changes in health-related behavior if their partner also does so [32].

Some think that another important factor in behavior is economic factors; however, in a study related to noncommunicable diseases and metabolic risk, no differences related to health behavior were found [33]. It is important to bear in mind that in all these types of situations an important figure is the physician and the attitude that he or she has as a moderator of the results of the health care service provided to patients [34].

In a study conducted with patients who had developed suicidal behavior linked to postpartum depressive disorder, it could be seen that they were in an existential impasse with depressive and anxious tendencies; this suicidal behavior was related to risk factors associated with a precarious pre-familial economic status, child abuse, disharmonious family relationships, abuse problems, emotional instability, accentuated personality, subclinical psychiatric distress, heredo-collateral history of mental illness, history of suicide attempts and even low cholesterol levels [35]. The relationship between low intellectual level and low emotional control is known to be associated with an increased risk of suicide, the association between poor emotional control and subsequent suicide risk in men has been shown to weaken over the life course, whereas the association between low intelligence and suicide risk appears to be constant [36].

In the case of HIV, people with disabilities have been identified as a key risk population. A study conducted in South Africa found a high prevalence of HIV infection in people with disabilities, especially in those with hearing impairment; the results showed the obvious as in some areas people with this problem showed less knowledge and higher risk behaviors than people without disabilities; what is important from this study is the establishment of the need to strengthen HIV information and communication strategies targeting people with all types of disabilities [37].

Chronic obstructive pulmonary disease represents an important public health problem due to its high prevalence, morbidity and cost to health, it has been possible to demonstrate that a behavior related to physical activity is one of the most beneficial measures to prevent chronic diseases in general [38].

Behavior and prevention

The importance of dental behavior in heart transplant recipients is fundamental; it has been possible to demonstrate the efficacy of daily oral hygiene control in this type of patient, so it would be important to establish modifications in terms of manual dexterity and motivation levels, in addition to explaining to them in special detail the importance of this type of measures and their effects on systemic health [39]. In Pakistan, maternal and infant mortality rates have long been among the highest in the world despite the fact that the main causes of death are largely preventable, but unlike in many other low- and middle-income countries, it has been shown that a change in mothers' health-seeking behavior towards themselves has a direct impact on the care of their children and vice versa [40].

It has also been shown that applications of health-related devices through mobile technology are associated with higher rates of health-promoting behaviors; however, certain groups such as the elderly are affected by a digital divide in which they have less access to these types of applications, a problem that needs to be solved [41].

Finally, we could not end this section without taking into account the importance of exercise, the American College of Sports

Medicine convened an international multidisciplinary roundtable on exercise and cancer in March 2018 in order to evaluate and translate the evidence linking physical activity and the prevention, treatment and control of this disease; apparently there are studies where there are a number of mechanisms by which physical activity could influence the development of cancer as in the case of melanoma, but we also found other studies in which physical activity would be beneficial how it occurs in the prevention of breast cancer, colon, endometrial, kidney, bladder, esophagus or stomach; on the other hand, if we reduce the time we dedicate to sedentary behavior could also reduce the risk of endometrial, colon and lung cancer [42].

Discussion

Throughout the study we have been able to see how behaviors influence when we face an illness or vice versa, i.e. how a certain behavior can end up favoring or worsening an illness. We have been able to see in several studies how they manage to demonstrate that a negative mental health could favor a dangerous behavior for health, thus favoring a higher risk of mortality.

The results indicate that when our behavior favors a positive self-control we can achieve an improvement in the different states of health and favor a quality of life as we have been able to see in those people who suffered from chronic diseases.

Another factor that also seems to influence our behavior we have found in the media with its way of informing, and how the social media especially influence the behavior of our young people as a result of the time they tend to spend in front of the television or the use of video games; a behavior that in a high percentage will end up favoring physical inactivity and a decrease in the number of hours of sleep needed, an important aspect to take into account given the importance that these represent in the prevention not only of health but also of the emotional aspect.

In reference to young people, an important aspect in terms of behavior and their emotional relationship is the influence exerted by grandparents, unfortunately there are few studies that study this important relationship, it would be advisable to encourage them in order to know in a more truthful way the influence they really exert on them.

We have also verified the importance of fear in diseases such as cancer, an emotion that always accompanies this type of disease and that favors a decrease in the immune system and therefore a greater risk of aggravation of the disease.

However, it would be necessary to develop more studies along the same lines in order to find out to what extent the different types of behavior can be related to diseases, since there are important questions that should be answered, here are some of them: what type of behavior is related to what type of disease; does the possible problems experienced in childhood influence behavior in any way? And if so, could we “presumably” think that the origin of the disease could be found in a poor control of those childhood experiences; could a certain behavior be associated with a specific disease; could the information in the media really favor the development and/or worsening of diseases? Possibly there are still many more questions to be answered.

It is possible that the behavior we have acquired and maintained, and which to some extent has affected us emotionally, could sooner or later also end up affecting our organism as a consequence of

its relationship with the autonomic nervous system given the powerful effect that emotions have on it.

Conclusion

We have seen how health is significantly influenced by the existence of certain behavioral patterns; we must pay special attention to those attitudes that we have maintained throughout our lives and that have affected us emotionally because sooner or later they could also end up affecting our organism.

It is important to achieve behaviors that favor the state of health, where the responses we have to the problems that arise in our day to day always predominate those that are positive rather than negative.

References

1. Elisabetta Farina, Francesca Borgnis, Thierry Pozo (2020) Mirror neurons and their relationship to neurodegenerative disorders. *J Neurosci Res* 98: 1070-1094.
2. Rahul Govind, Jatinder Jit Singh, Nitika Garg, Shachi D'Silva (2019) Not walking the walk: how dual attitudes influence behavioral outcomes in ethical consumption. *Revista de Ética Empresarial* 155: 1195-1214.
3. Bjørn Hofmann (2020) Recognize and address the many ethical aspects of the disease. *Consejos de Educación del Paciente*. Epub 105: 1201-1208.
4. Zadworna-Cieślak M (2019) Spirituality, life satisfaction, and health-related behavior of older residents of long-term care institutions: a pilot study. *Explore (New York, N.Y.)* 16: 123-129.
5. Hong Y, Kim S (2019) Media influence presumed influence of Health Prevention: How media indirectly promote health prevention behaviors through descriptive norms. *Taylor & Francis Online* 1800-1810.
6. Puspitasari I, Firdauzy A (2019) Characterization of consumer behavior in leveraging social networks for e-patient and health-related activities. *Nt J Environ Res Salud Pública*. 11 de septiembre de 16: E3348.
7. Aung PL, Pumpaibool T, Soe TN, Burgess J, Menezes LJ, et al. (2019) Health education through loudspeaker media announcements on malaria care: prevention and practice among people living in a malaria endemic area in northern Myanmar. *Malar J*. 2019 12 de noviembre 18: 362.
8. Mitilian E, Malli F, Verger P (2019) Image of the new vaccination obligation in the media. *Vaccine* 38: 498-511.
9. Mudryj AN, Riediger ND, Bombak AE (2019) Relationships among health-related behaviors in the Canadian adult population. *BMC Public Health* 19: 1359.
10. Kim EG (2019) General health and drinking behavior among pregnant and lactating women in Korea. *Epidemiol Health* 41: e2019036.
11. Xue XD, Jiang GH, Li W, Wang DZ, Song GD, et al. (2019) [Status quo on smoking and the related change pattern of smoking-related behavior in the past 20 years in urban residents in Tianjin]. *Zhonghua Liu Xing Bing Xue Za Zhi* 40: 1095-1098.
12. Sandoval GA, Monteiro MG, De Pinho Campos K, Shield K, Marinho F (2019) Sociodemographics, lifestyle factors and health status indicators associated with alcohol consumption and related behaviors: an analysis of the Brazilian population. *Salud publica* 178: 49-61.
13. Ordway MR, Wang G, Jeon S, Owens J (2020) Role of sleep duration in the association between socioecological protective factors and health risk behaviors in adolescents. *J Dev Behav Pediatr* 41: 117-127.

14. Lampert T, Kuntz B (2019) Effects of poverty for health and health behavior of children and adolescents: results from KiGGS Wave 2. *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz* 62: 1263-1274.
15. Sina Ostendorf, Elisa Wegmann, Matthias Marca (2020) Social networking issues-Use in German children and adolescents-The interplay of the need to belong, online self-regulatory competencies and age 17: 2518.
16. Coxon JD, Hosey MT, Newton JT (2019) How does dental anxiety affect adolescent oral health? A regression analysis of the 2013 Child Dental Health Survey. *Br Dent J* 227: 823-828.
17. Mobarek NH, Khalil AM, Talaat DM (2019) Exposure to electronic screens and children's anxiety and behavior during dental treatment. *J Dent Niño (Chic)* 86: 139-144.
18. Pereira B, Rosário P, Silva C, Figueiredo G, Núñez JC, et al. (2019) The mediating and/or moderating role of the complexity of healthy eating knowledge and self-regulatory behavior in the relationship between family income and child obesity. *Int J Environ Res Salud Pública* 16: E4207.
19. Goldberg CS, Hu C, Brosig C, Gaynor JW, Mahle WT, et al. (2019) Behavior and quality of life at 6 years for children with hypoplastic left heart syndrome. *Pediatría* 144: e20191010.
20. Sadruddin AFA, Ponguta LA, Zonderman AL, Wiley KS, Grimshaw A, et al. (2019) How do grandparents influence child health and development? A systematic review. *Soc Sci Med* 239: 112476.
21. Clark LL, Lekkai F, Murphy A, Perrino L, Bapir-Tardy S, et al. (2019) The use of positive behavioral support plans in inpatient mental health care: a mixed methods study. *Psychiatr Ment Health Nurs* 27: 140-150.
22. Araújo-Soares V, Hankonen N, Presseau J, Rodrigues A, Sniehotta FF (2019) Development of behavior change interventions for self-management in chronic diseases: a comprehensive view. *Eur Psychol* 24: 7-25.
23. Julio F, Caetano G, Januário C, Castelo-Branco M (2019) The effect of impulsivity and inhibitory control deficit on saccadic behavior in individuals with premanifest Huntington's disease. *Orphanet J Rare Dis* 14: 246.
24. Xiang M, Zhang Z, Liang H (2019) Sedentary behavior is related to mental distress in pregnant women differently across trimesters: an observational study in China. *Affects disorder* 260: 187-193.
25. Faiz KW, Labberton AS, Thommessen B, Rønning OM, Barra M (2019) Stroke-related knowledge and lifestyle behavior among stroke survivors. *J Stroke Cerebrovasc Dis.* 5 de septiembre de 28: 104359.
26. Jun ER, Kim SH, Cho YJ, Kim YA, Lee JY (2019) The influence of negative mental health on health behavior and mortality risk: analysis of the Korean longitudinal study on aging from 2006 to 2014. *Coreano J Fam Med* 40: 297-306.
27. Dorien Brouwer-Goossensen, Heleen M den Hertog, Marinke A Mastenbroek-de Jong, Lisette J E W C van Gemert-Pijnen, Erik Taal (2021) Patient perspectives on health-related behavior change after transient ischemic attack or ischemic stroke. *Omportamiento cerebral* 11: e01993.
28. Toro L, Gallardo C, Torrijos M, Arbelo G, García D, et al. (2021) Fear as a predictive factor in the disease. *Revista Científica HYGIA de Enfermería*, nº 105 volumen XXXVIII. 2021. Pag 60, 2º párrafo. [Hygia105-1.pdf](https://www.hygia105-1.pdf) (colegioenfermeriasevilla.es)
29. Meyrose AK, Wüstner A, Otto C, Lampert T, Ravens-Sieberer U (2019) Associations of maternal educational history with health and health behavior in infants. *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz* 62: 1067-1076.
30. Jackson SE, Steptoe A, Wardle J (2015) The influence of partner behavior on health behavior change: the English Longitudinal Study of Aging. *JAMA Intern Med* 175: 385-392.
31. Kamstrup-Larsen N, Dalton SO, Grønbaek M, Broholm-Jørgensen M, Thomsen JL, et al. (2019) The effectiveness of general practice-based health checks on health behavior and incidence of noncommunicable diseases in individuals with low socioeconomic status: a randomized controlled trial in Denmark. *BMJ Open* 9: e029180.
32. Manzoor F, Wei L, Hussain A, Asif M, Shah SIA (2019) Patient Satisfaction with Health Care Services; An application of physician behavior as a moderator. *Int J Environ Res Salud Pública* 16: E3318.
33. Ramli FF, Shuid AN, Pakri Mohamed RM, Tg Abu Bakar Sidik TMI, Naina Mohamed (2019) Health-seeking behavior for erectile dysfunction in patients on methadone maintenance treatment. *Int J Environ Res Salud Pública.* 16: E4249.
34. Bondoc EN, Marinescu I, Marinescu D (2019) Psychological and biological markers of suicidal behavior in postpartum depressive disorder. *Curr Health Sci J* 45: 210-217.
35. Hansson Bittar N, Falkstedt D, Sörberg Wallin A (2019) How intelligence and emotional control are related to suicidal behavior across the life course: a record-based study with a 38-year follow-up. *Psychol Med* 50: 2265-2271.
36. Pengpid S, Peltzer K (2019) HIV status, knowledge, attitudes and behavior of people with and without disabilities in South Africa: evidence from a national population-based survey. *Pan Afr Med J* 33: 302.
37. Sánchez Castillo S, Smith L, Díaz Suárez A, López Sánchez GF (2019) Physical activity behavior in people with COPD residing in Spain: a cross-sectional analysis. *Pulmón* 197: 769-775.
38. Sezgin Y, Sezgin A (2019) Periodontal status and dental behavior of heart transplant recipients and healthy controls. *Acta Odontol Scand* 78: 20-25.
39. Haque M, Choudhury A, Haque A, Blackwood RA (2019) Understanding health-seeking behavior of mother and child in urban Pakistan. *Cuidado de la salud int* 43: 549-567.
40. Mahmood A, Kedia S, Wyant DK, Ahn S, Bhuyan SS (2019) Use of mobile health applications for health promotion behavior among people with chronic medical conditions. *Salud de digitos* <https://www.ncbi.nlm.nih.gov/pubmed/31656632>.
41. Patel AV, Friedenreich CM, Moore SC, Hayes SC, Silver JK, et al. (2019) Report of the American College of Sports Medicine Roundtable on Physical Activity, Sedentary Behavior, and Cancer Prevention and Control. *Med Sci Sports Exerc* 51: 2391-2402.
42. Goleman D (1995) Emotional Intelligence. Extracted from Goleman Daniel *Inteligencia Emocional.pdf* - Google Drive.

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