

A Review

Periodontal Healing Through Behaviour Change

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INTRODUCTION

Several studies have offered clues pointing to lifestyle factors as the primary cause of poor health and disease control. Addressing patients' lifestyle concerns is the key to providing healthcare, especially oral healthcare.⁽¹⁾ It has been hypothesized that dental professionals could help patients most with managing their chronic diseases if they paid more attention to patients' behavior.

Periodontal health refers to the state of the gums, bones, and other tissues that support the teeth⁽²⁾. Good periodontal health means that these tissues are healthy and free from inflammation and infection. Maintaining good periodontal health is important for overall oral health and can help prevent tooth loss and other oral health problems⁽³⁾. Self-care and lifestyle modifications are patient-performed therapies necessary to preserve periodontal health. Chronic periodontitis, like many other noncommunicable illnesses, can be managed by addressing some of the risk factors, which will have a positive impact on the patient's oral and general health. While this may seem simple in theory, many dentists lack the expertise, experience, and/or self-assurance necessary to assist their patients in making positive changes to their daily habits. There has been a rise in both interest and study on behavior change among those concerned with periodontal health. This is a concise overview of the research on periodontal health behavior interventions.

Blame it on the Lifestyle!!

Inadequate plaque management, smoking, inactivity, excessive alcohol use, chronic stress, and poor eating habits are all behavioral variables associated with poor periodontal health⁽⁴⁾. These lifestyle choices are adjustable, yet they nonetheless contribute significantly to the global illness and cost burden⁽⁵⁾.

This is likely due to the fact that healthy lifestyle habits, despite their positive effects on health, can be challenging to develop and maintain. While public and community-based programs can help raise patients' awareness of the need of adopting healthier lifestyle choices, the significance that in-office treatments play in this area cannot be understated. It has been suggested that the treatment's effectiveness would suffer greatly if patients don't take responsibility for managing their own plaque levels patients don't take responsibility for managing their plaque levels, the treatment's effectiveness would suffer greatly.⁽⁶⁾ It is crucial, then, that behavior management be considered a part of both the prevention and treatment of periodontal diseases.

What's the Challenge?

The process of altering one's behavior should not be taken lightly and is, in fact, rather intricate. Understanding why it is so difficult to alter one's behavior requires some introspection on a few basic ideas of behavior modification. It boils down to making deliberate, fresh decisions about routines and behaviors and then acting on them. It's rarely pleasant, simple, straight forward, or even somewhat inconvenient. Habits are ingrained routines that people engage in without giving them much consideration, although behaviors and habits are still distinct things⁽⁷⁾. It's generally accepted that patients experience the most success when they're not at a hospital or dentist's office, but rather in their own home or community. In fact, forcing someone to change their behavior is

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likely to backfire and make the problem even worse⁽⁸⁾. In this way, the clinician's job is to aid in what could be considered a self-improvement process.

Partnering the Patient

With the practice of self-care to maintain low bacterial plaque levels and minimize lifestyle-related risk factors, the patient plays an important part in the upkeep of periodontal health and plays pivotal role in maintenance of periodontal health. Patients should be placed at the center of any attempts or behavior change interventions⁽⁹⁾. Every action in life is driven by an underlying motive that is intrinsic to the person and entwined with their beliefs and world view. The patient is ultimately responsible for weighing the benefits and drawbacks of any course of action, such as the potential reward of reduced oral plaque levels vs the time and effort necessary to engage in self-care. We must remember that inspiration is not a drug or a medical intervention, but rather a latent trait that may be sparked by the people around us.

Being Responsible Dental Practitioners

With patient involvement or the activation of the patient's own values, the purpose is to promote patient choice and the implementation of that which the patient picks as suitable goals. Oral health professionals have a responsibility to provide patients with the support necessary to make positive changes in their health behaviors at the individual level; nonetheless, the job of the clinician is to direct or coach. The understanding of a patient's level of risk and the setting of goals for behavioral change are both included in the routine clinical assessment of lifestyle factors that is carried out at regular intervals. Additionally, information or teaching skills are provided to the patient when they are willing to listen.

Models of Behavior Change

There are several models of behavior change that have been developed to help explain and predict why people engage in certain behaviors and how to promote behavior change.

Here are some of the most well-known models:

1. Transtheoretical Model (TTM) or Stages of Change Model^(10,11): This model proposes that behavior change occurs in five stages: precontemplation, contemplation, preparation, action, and maintenance. It suggests that people move through these stages in a non-linear way and that interventions should be tailored to the individual's stage of change.
2. Health Belief Model (HBM)⁽¹²⁾: This model suggests that an individual's behavior is influenced by their perceived susceptibility to a health problem, the severity of the health problem, the perceived benefits of behavior change, and the perceived barriers to behavior change.
3. Theory of Planned Behavior (TPB)⁽¹³⁾: This model suggests that an individual's behavior is influenced by their attitude towards the behavior, their subjective norms (perceptions of what others think about the behavior), and their perceived behavioral control (perceptions of how easy or difficult it is to perform the behavior).
4. Social Cognitive Theory (SCT)⁽¹⁴⁾: This model suggests that behavior change is influenced by three factors: personal factors (such as beliefs and values), environmental factors (such as social norms and physical environment), and behavioral factors (such as self-efficacy and outcome expectations).
5. Self-Determination Theory (SDT)⁽¹⁵⁾: This model suggests that behavior change is most likely to occur when an individual has autonomy, competence, and relatedness. It proposes that people are more likely to engage in behavior change if they feel that they have control over their behavior, are capable of performing the behavior, and feel connected to others.

These models can be useful in developing effective behavior change interventions by identifying the factors that influence behavior and tailoring interventions to address those factors. However, no model can fully explain or predict behavior change, as human behavior is complex and influenced by many different factors.

Practice Strategies

Giving patients information and tools in the hopes that they would alter their behavior is a classic example of paternalism, which has been shown to place patients in a reactive rather than proactive state. In order to facilitate open and honest communication between clinicians and patients, rapport, also known as the "therapeutic alliance," which is a crucial component in establishing and preserving patient autonomy, is required.

There are many different tools and approaches that can be used to promote behavior change, including:

1. Goal setting⁽¹⁶⁾: Setting specific, measurable, achievable, relevant, and time-bound (SMART) goals can help individuals identify what they want to achieve and provide a clear direction for their behavior.
2. Self-monitoring⁽¹⁷⁾: Keeping track of behavior through self-monitoring tools, such as journals or apps, can help individuals become more aware of their habits and identify areas for improvement.
3. Feedback⁽¹⁸⁾: Providing individuals with feedback on their behavior can be a powerful motivator for change. Feedback can be given in many forms, such as praise or constructive criticism.
4. Social support⁽¹⁹⁾: Encouragement and support from friends, family, or a community can help individuals stay motivated and accountable for behavior change.

5. Education⁽²⁰⁾: Providing individuals with information about the benefits of behavior change and strategies for achieving their goals can help increase their motivation and confidence.
6. Incentives⁽²¹⁾: Providing rewards or incentives for behavior change can help individuals stay motivated and committed to their goals.
7. Behavioral contracts⁽²²⁾: Formalizing behavior change through a contract can help individuals commit to a plan of action and hold themselves accountable.
8. Cognitive-behavioral therapy (CBT)^(23,24): CBT is a form of therapy that helps individuals identify and change negative thought patterns and behaviors that may be hindering their ability to change.
9. Mindfulness-based approaches⁽²⁵⁾: Mindfulness practices, such as meditation, can help individuals become more aware of their thoughts and behaviors, and develop greater self-control.
10. Environmental modifications⁽²⁶⁾: Changing the environment to support behavior change, such as making healthy food choices more accessible, can make it easier for individuals to maintain their new habits.

All patients, including those who appear to be highly motivated right now, may benefit from these techniques and therapies. Everyone may benefit from them because they are also an important element of prevention; nevertheless, they must always be adapted to the specific needs of the patient. No matter the patient or circumstance, application necessitates settling on a desired outcome and developing a plan to achieve it.

Merely possessing information, and comprehension does not ensure action. Similarly, it is difficult for health practitioners to implement strategies for behavior modification (ie, to change their own practice behaviors). Some helpful practical pointers for putting the abilities presented to use in actual clinical practice would be greatly appreciated. The first of these is the significance of creating straightforward methods of monitoring and updating both baseline behaviors and the outcomes of those activities. A thorough record of case histories and prior interactions is crucial for tailoring future dialogues to each individual. Keeping tabs on how well the patient is doing at changing their behavior is helpful since praising or reflecting on the patient's achievements boosts their self-esteem and motivation to continue with the self-regulation process. In addition, behavior is a process rather than an event, it is continuous throughout life and varies in degree at different times.

Successful behavior modification is not a race to a predetermined finish line, but rather a process characterized by techniques that promote gradual but steady adaptation. As physicians, it is our responsibility to motivate and inspire patients to make changes in their oral health routines that are commensurate with their individual tolerance for risk, taking into account their busy schedules and the resources they have available to them. Research shows that it's beneficial to have patients seeing the same doctor for all of their consultations, particularly those when they discuss changing their behavior. It is recommended, while using a variety of tools or techniques, to start with reasonably reachable objectives to assist the patient feel success, and then to propose addressing a more complex goal based on this achievement.

Closing Comments

Surely, it will take more time, for healthcare to evolve to reach patient-centered care. Clinicians may make the most of the available alternatives for influencing patient behavior by becoming trained experts in behavior modification techniques. This is best done in the early stages of a dentist's career, during their time in school as an undergraduate. Several organizations have already started doing this and see positive results. Interdental cleaning self-efficacy in periodontal patients can be improved by teaching it to dental hygiene undergraduates through motivational interviewing training.

Patients' wellness may benefit from attention to their periodontal health. Yet self-care and lifestyle practices are crucial for controlling the etiologic agent and host inflammatory responses, which are essential for preserving health. As a result, periodontal care therapy options should always include behavior change therapies. While there is still much to discover about the clinical setting and the application of behaviors change principles, there is mounting evidence for the effectiveness of strategies that foster clinician-patient rapport and techniques that increase patient self-efficacy in promoting healthy lifestyle behaviors. The dental syllabus and everyday clinical practices should include instruction on predictable techniques utilizing simple and dependable procedures or technologies.

REFERENCES

1. Hardcastle SJ, Hancox J, Hattar A, Maxwell-Smith C, Thøgersen-Ntoumani C, Hagger MS. Motivating the unmotivated: how can health behavior be changed in those unwilling to change? *Frontiers in Psychology*. 2015;6.
2. Hatti S, Ravindra S, Satpathy A, Kulkarni RD, Parande MV. Biofilm inhibition and antimicrobial activity of a dentifrice containing salivary substitutes. *Int J Dent Hyg*. 2007;5(4):218-24.
3. Jain A, Grover V, Kumar A, Chatterjee A, Grover H, Pandit N, et al. ISP good clinical practice recommendations for the management of dentin hypersensitivity. *Journal of Indian Society of Periodontology*. 2022;26(4).

4. Genco RJ, Borgnakke WS. Risk factors for periodontal disease. *Periodontology* 2000;2013;62(1):59-94.
5. Singla R, Singla N, Acharya S, Prabhakar R, Chakravarthy K, Singhal D. The impact of lifestyles on the periodontal health of adults in Udupi district: A cross sectional study. *Journal of Indian Society of Periodontology*. 2016;0(0).
6. Duane B. Psychological approaches to behaviour for improving plaque control. *Evidence-Based Dentistry*. 2017;18(1):3-4.
7. Ersche KD, Lim T-V, Ward LHE, Robbins TW, Stoehl J. Creature of Habit: A self-report measure of habitual routines and automatic tendencies in everyday life. *Personality and Individual Differences*. 2017;116:73-85.
8. Levy A, Maaravi Y. The boomerang effect of psychological interventions. *Social Influence*. 2017;13(1):39-51.
9. Michie S, West R, Sheals K, Godinho CA. Evaluating the effectiveness of behavior change techniques in health-related behavior: a scoping review of methods used. *Translational Behavioral Medicine*. 2018;8(2):212-24.
10. Prochaska JO, Velicer WF. The transtheoretical model of health behavior change. *Am J Health Promot*. 1997;12(1):38-48.
11. Satpathy A. Transtheoretical Model of Behavioural Change for Oral Habit, Tobacco and Alcohol Cessation. *Indian Journal of Forensic Medicine & Toxicology*. 2020;14(4):8137-9.
12. Jones CL, Jensen JD, Scherr CL, Brown NR, Christy K, Weaver J. The Health Belief Model as an explanatory framework in communication research: exploring parallel, serial, and moderated mediation. *Health Commun*. 2015;30(6):566-76.
13. Tapera R, Mbongwe B, Mhaka-Mutepfa M, Lord A, Phaladze NA, Zetola NM. The theory of planned behavior as a behavior change model for tobacco control strategies among adolescents in Botswana. *PLoS One*. 2020;15(6):e0233462.
14. Bandura A. Social cognitive theory: an agentic perspective. *Annu Rev Psychol*. 2001;52:1-26.
15. Deci EL, Ryan RM. Self-Determination Theory. *Handbook of Theories of Social Psychology: Volume 1* 2012. p. 416-37.
16. Bailey RR. Goal Setting and Action Planning for Health Behavior Change. *American Journal of Lifestyle Medicine*. 2017;13(6):615-8.
17. McLoughlin GM, Rosenkranz RR, Lee JA, Wolff MM, Chen S, Dziewaltowski DA, et al. The Importance of Self-Monitoring for Behavior Change in Youth: Findings from the SWITCH® School Wellness Feasibility Study. *International Journal of Environmental Research and Public Health*. 2019;16(20).
18. Yechiam E, Casal S, DellaValle N, Mittone L, Soraperra I. Feedback and efficient behavior. *Plos One*. 2017;12(4).
19. Greaney ML, Puleo E, Sprunck-Harrild K, Haines J, Houghton SC, Emmons KM. Social Support for Changing Multiple Behaviors: Factors Associated With Seeking Support and the Impact of Offered Support. *Health Education & Behavior*. 2017;45(2):198-206.
20. Arlinghaus KR, Johnston CA. Advocating for Behavior Change With Education. *American Journal of Lifestyle Medicine*. 2017;12(2):113-6.
21. Kullgren JT, Williams GC, Resnicow K, An LC, Rothberg A, Volpp KG, et al. The Promise of Tailoring Incentives for Healthy Behaviors. *Int J Workplace Health Manag*. 2016;9(1):2-16.
22. Neale AV. Behavioural contracting as a tool to help patients achieve better health. *Fam Pract*. 1991;8(4):336-42.
23. Beck AT. Cognitive Therapy: Nature and Relation to Behavior Therapy – Republished Article. *Behavior Therapy*. 2016;47(6):776-84.
24. Pattnaik N, Satpathy A, Mohanty R, Nayak R, Sahoo S. Interdisciplinary Management of Gingivitis Artefacta Major: A Case Series. *Case Reports in Dentistry*. 2015;2015:1-4.
25. Schuman-Olivier Z, Trombka M, Lovas DA, Brewer JA, Vago DR, Gawande R, et al. Mindfulness and Behavior Change. *Harvard Review of Psychiatry*. 2020;28(6):371-94.
26. Foster C, Hillsdon M. Changing the environment to promote health-enhancing physical activity. *Journal of Sports Sciences*. 2004;22(8):755-69.