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Commentary

Emerging theories into the social determinants of health: implications for oral health promotion

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Abstract – In recent years public health research has increasingly focused upon exploring the social determinants of health. This interest has partly arisen through an acknowledgement of the limitations of educational preventive approaches in improving population health and reducing health inequalities. Many health education interventions have been influenced by health behaviour research based upon psychological theories and models. These theories focus at an individual level and seek to explore cognitive and affective processes determining behaviour and lifestyle. Current psychological theories have only a limited value in the development of public health action on altering the underlying social determinants of health. New theoretical approaches have however, emerged which explore the relationship between the social environment and health. This paper aims to review and highlight the potential value to oral health promotion of three important public health theoretical approaches: life course analysis, salutogenic model and social capital. It is important that an informed debate takes place over the theoretical basis of oral health promotion. As the field of oral health promotion develops it is essential that it is guided by contemporary and appropriate theoretical frameworks to ensure that more effective action is implemented in the future.

Key words: oral health promotion; theory

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Health promotion practice and policy is currently undergoing a process of radical change. For many years, a health education model has been the dominant approach in prevention. This approach placed the emphasis on lifestyle and behavioural change through education and awareness raising programmes. The focus of many health education interventions has been on defined diseases, targeted at changing the behaviours of high risk individuals. Health professionals have dominated this approach in terms of the programme development, implementation and evaluation. This health education model has been very popular with the dental profession as it fits the clinical approach to care and treatment of individual patients. Recent effectiveness reviews of the oral health education and promotion literature have however, identified the limitations of many educational interventions to produce sustained improvements in oral health. Another common finding of the reviews was the lack of theory underpinning many interventions (1–5).

In recent years a shift has taken place in public health and health promotion policy. The emphasis is increasingly now on reducing health inequalities through action on changing the determinants of

health (6–9). In the UK the Acheson Review highlighted the importance of the socioeconomic determinants of health inequalities and identified a range of social and welfare policies to promote the health and well being of the population (10). In the USA the Institute of Medicine has reviewed the evidence base for public health interventions and has recommended a change in approach is required (11). The report stresses the importance of focusing on the social determinants of disease, injury and disability, and of adopting a complementary range of different interventions to promote health. The World Health Organisation global strategy for the prevention and control of noncommunicable diseases also places emphasis on developing interventions which address the environmental, economic, social and behavioural determinants of chronic disease (12). In addition, the recently published US Surgeon Generals Report on Oral Health has highlighted the importance of the social and environmental determinants of oral health and the need to adopt a more holistic approach to oral health promotion activities (13).

This paper aims to review and highlight the potential value to oral health promotion of emerging theories in public health research into the social determinants of health. The implications for the development of more innovative and effective approaches in oral health promotion policy and practice will also be discussed. First the limitations of the traditional theory base of dental health education will be reviewed.

Limitations of psychological theoretical base

Dental health education has been heavily influenced by health behaviour research based upon psychological theories developed to explain individual lifestyle (14). The health behaviour literature has been dominated by theoretical approaches which stress cognitive processes as determinants of behaviour. This is despite the findings of many studies which reveal a weak relationship between psychological concepts such as motivations, beliefs, attitudes and opinions with actual behaviour (15). The shortcomings of the knowledge-attitude-behaviour (KAB) model have been highlighted for many years (16, 17) but this is still being used as the theoretical framework for many dental health education interventions (4). More elaborate and complex psychological models also have limited value. In a recent meta analysis of studies using the well known models of Theory of Reasoned Action and Theory of Planned Behaviour, only 40–50% of variance of intention and 20–40% variance of behaviour were explained by the models (18).

Many psychological theories such as the Health Belief Model are based on the hypothesis that a sense of susceptibility to disease induces behaviour change (19). This view has been challenged on two counts. First such a hypothesis is based upon the assumption that direct health concerns are the underlying reasons for change. Evidence from many studies have however, revealed the importance of social or other motivating factors rather than health concerns as driving behaviour change (20). Secondly, the psychological analysis largely assumes a rational and logical basis of human behaviour, which is not a true reflection of human experience in the real world where social, environmental and political factors greatly determine behaviour (6). Psychological theories of health behaviour largely ignore the fundamental importance of the social, environmental and political determinants of health (21).

As Bunton and colleagues have stated ‘failure to include social, economic, environmental and political factors in any analysis of health behaviours ultimately results in a very negative and victim blaming understanding which can lead to the development of potentially harmful and largely ineffective health policies’ (22).

In search of a contemporary theory base for oral health promotion

An alternative theory base is needed to support the development of effective oral health promotion policy and practice, and which acknowledges the importance of the wider social determinants of oral health. Interventions to reduce oral health inequalities need to be guided by theoretical frameworks that are developed from an analysis of the origins and processes underlying health disparities.

Three emerging theoretical approaches will now be described and their potential value to the development of oral health promotion highlighted. The theoretical approaches selected all focus upon exploring the basis for health inequalities and recognise the importance of the social and environmental determinants of health. The theories reviewed below have provoked considerable debate and controversy within the public health research community over their relevance and salience. It is important that within the field of oral health promo-

tion an informed debate also takes place on the potential value of these theories.

Life course analysis

This theory is based upon an analysis of the complex ways in which biological risk interacts with economic, social and psychological factors in the development of chronic disease throughout the whole life course (23, 24). A life course perspective considers an individual's disease status as a marker of their past social position, As Blane powerfully states 'A person's past social experiences become written into the physiology and pathology of their body. The social is, literally, embodied; and the body records the past, whether as an ex-officer's duelling scars or an ex-miner's emphysema' (25).

A wealth of epidemiological data supports this approach. The importance of early life circumstances on health in adulthood have been highlighted in birth cohort studies (26, 27). For example a relationship between low birth weight and later socioeconomic circumstance has been demonstrated (28). Indeed birth weight can be considered as a marker of social conditions in later life. The idea of biological programming in which intrauterine and infant circumstances are associated with the prevalence of chronic diseases in middle age and later life is also supportive of the life-course perspective (29).

The life-course perspective places particular emphasis upon the social context and the interaction between people and their environments in the passage through life. This approach is of value in assessing how advantage and disadvantage may cluster cross-sectionally and accumulate longitudinally, thus contributing to the creation of health and social inequalities in society. A person who is long-term unemployed is likely to live in relatively poor quality accommodation, have restricted access to a healthy diet and smoke as a means of coping with stress and boredom. This is an example of how disadvantage may cluster cross-sectionally. In contrast a child born into a middle-class family is likely to acquire the necessary educational requirements to enter a relatively stable professional position in the labour market. On retirement this individual will have access to an occupational pension which will provide financial security in later life, an example of the accumulation of advantage longitudinally (25).

It has been proposed that there are socially critical periods in development which can have profound long-term effects (24). A range of critical periods in human development which may have particular importance in determining health status of individuals and levels of health inequalities within populations are listed below (24):

- transition from primary to secondary school;
- school examinations;
- entry to labour market;
- leaving parental home;
- establishing own residence;
- transition to parenthood;
- job insecurity, change or loss;
- exit from labour market.

Salutogenic model

Rather than focus attention on understanding the nature of disease and its associated risk behaviours, this approach considers the factors responsible for creating and maintaining good health, in other words the origins of health or salutogenesis (30, 31). The model's central construct, sense of coherence seeks to explain the relationship between life stressors and individuals and communities health status. The central hypothesis of the salutogenic model is that stressors are a standard feature of human existence and that individuals and communities with a stronger sense of coherence are better equipped to deal with them and therefore maintain good health and well being. Researchers have investigated the value of the model in relation to individual's adjustment to the impacts of chronic diseases including diabetes, AIDS and arthritis (32–34). As yet very little research has been undertaken in relation to oral health. Two studies produced conflicting results in relation to patients coping strategies in response to oral cancer (35, 36). In a more recent study with young people, sense of coherence was identified as a psychosocial determinant of adolescent's pattern of dental attendance (37).

The salutogenic model has been further developed recently into a framework that is termed 'a salutogenic setting' (38). This development focuses attention on identifying and modifying the sociostructural factors that influence the health status of populations. By promoting salutary factors within communities this approach would aim to move the population more towards the health end of the health–disease continuum. Such an approach is very much in line with a whole population strategy (39). Examples of population salutary factors in-

clude levels of education, safe working and housing conditions and supportive public policies. These factors have a positive influence on a range of diverse health outcomes including oral health.

Social capital

In recent years a great deal of interest and debate within the international public health research community has focused upon the concept of social capital. One of the criticisms of social capital is the lack of clarity over the exact meaning of the concept (40, 41). Within the field of public health interest in social capital has largely been stimulated by Putnam's work on civic participation and the impact of this on local governance (42). Putnam defines social capital as 'features of social organisation, such as civic participation, norms of reciprocity, and trust in others, that facilitate co-operation for mutual benefit' (42). It is essentially assessing the level of social trust that operates within a community, how safe people feel together, how much help people give each other for their own and collective benefit and the degree of involvement in social and community issues such as voting and participation in community groups. In sociology and development economics the value and relevance of social capital has also been explored with greater emphasis being placed in these disciplines on the material and political aspects of the concept (43, 44).

Varying levels of social capital have been used as an explanation for differing life expectancy rates between different countries. Based upon Wilkinson's work on the importance of relative poverty research has demonstrated a consistent and strong relationship between income distribution and life expectancy in a selection of developed countries (45–50). In egalitarian countries which have a narrower wealth gap separating the rich from the poor, life expectancy was shown to be much higher than in countries with greater economic inequalities. The research identifies the extent of inequality, or relative poverty as the critical factor determining differences in life expectancy. In the richest countries in the world, but which have a very unequal distribution of wealth, life expectancy was shown to be less than relatively poorer countries with more equitably distributed incomes (46).

A research group from the Harvard School of Public Health have published results from a study in which data from the US General Social Survey was assessed to measure the relationship between measures of social capital, income inequality and mortality in 39 States across the US (49). The results indicated that income inequality was strongly associated with lack of social trust and that States with high levels of social mistrust had higher age adjusted mortality rates from a range of conditions including coronary heart disease, malignant neoplasms, cerebrovascular disease, unintentional injury and infant mortality. Kawachi and colleagues concluded that 'the growing gap between the rich and the poor affects the social organisation of communities and that the resulting damage to the social fabric may have profound implications for the public's health' (49).

The findings of research studies exploring the psychosocial basis of health inequalities based upon the concept of social capital have been challenged by critics who instead stress the available evidence on the importance of absolute poverty and the material and structural basis for health inequalities (40, 41, 48).

The findings from studies assessing the relationship between social capital and health are however, in accordance with previous research which has highlighted the impact of social support and social networks on mortality and morbidity (51–53).

A recent ecological study in Brazil has assessed the relationship between income inequality, social cohesion and dental caries levels in 12-year-old-schoolchildren (54). The study demonstrated that income inequality expressed by the GINI coefficient was significantly associated with percentage of children free of caries and mean DMF. Social cohesion was significantly inversely associated with percentage of caries free children.

Implications for oral health promotion

What implications can be drawn from these theoretical approaches for the development of more effective oral health promotion policies and practices? It is certainly very clear that many of the elements in these interesting and challenging theories have some salience to the promotion of oral health. The list below shows the potential implications of these theories for oral health promotion. Although none of these points are new or especially radical in nature, they are supportive of the continuing development of oral health promotion:

- focus of interventions: determinants of oral health;
- strategies adopted: complementary range of actions;

- community empowerment and involvement: active participation of target populations;
- timing of interventions: window of opportunity to maximise health gain;
- partnership working: multidisciplinary collaboration.

The theories reviewed have highlighted the need to focus action on the underlying social, economic and environmental determinants of oral health. It is very apparent that conditions largely determine behaviour and therefore the focus of interventions should be on changing the health damaging conditions. Action on improving the environment to create a more health promoting setting where the healthier choices are the easier choices has enormous potential in oral health promotion. At a local level oral health input into initiatives such as the Health Promoting School network can produce sustainable improvements in oral health outcomes (55). Action through advocacy and lobbying is also required at a national and international level to protect and maintain a safe environment (20).

The limitations of health education in effecting sustained improvements in oral health is even more apparent when one considers the theories reviewed. A comprehensive range of complementary strategies including healthy public policies are required to effectively promote oral health and reduce inequalities. The actions outlined in the Ottawa Charter although first published in the 1980s are more relevant now than ever (56). Dental health education programmes alone will have only a marginal impact and can indeed increase oral health inequalities (57). Policies that provide health, social and welfare support can act as a spring board to assist the most vulnerable groups to achieve their full potential in society (25).

The active participation of local communities in the development, planning and implementation of interventions is critical. Community development approaches to health promotion in which empowerment, ownership and participation of local people in the projects are central, have not been utilised fully in oral health promotion (58). Active involvement in local health issues can stimulate a sense of belonging and community spirit and therefore increase social capital within a community.

The importance of timing and identifying 'windows of opportunity' when interventions may have the greatest long-term benefits in promoting oral health and reducing inequalities is an issue that needs to be explored further. Developing and implementing interventions that offer appropriate support at critical periods has enormous potential. For example, supporting mothers and young children with a range of complementary measures should have many longer-term benefits (10). Oral health promotion interventions which seek to create a health promoting environment in nurseries offer great potential (59).

Oral health professionals working in isolation are unlikely to achieve sustained long-term improvements in oral health (4). Working in collaborative partnerships with other relevant professionals and agencies is more likely to produce desired results. Successful collaborative working requires a shared agenda for action in which common risks/health factors are identified (60).

Conclusion

Oral health promotion as an emerging discipline needs to be based upon appropriate, rigorous, high quality theory if it is to develop and mature. Within public health discussion and debate is focusing on the value of new theories and concepts. It is important that oral health promoters engage in an informed debate over the theoretical nature of their work**.** As Hochbaum and colleagues have stated 'Any profession that is not based on sound and continuously evolving theories that yield new understanding of its problems and yields new methods, is bound to stagnate and fall behind in the face of changing challenges' (61).

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