



RESILIENCE, COPING AND SALUTOGENIC
APPROACHES TO MAINTAINING AND GENERATING
HEALTH: A REVIEW

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Athrofa y Gymdeithas, Iechyd a Moeseg Caerdydd

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EXECUTIVE SUMMARY:

Background

As part of its programme for developing public health guidance on behaviour change, NICE commissioned a review of “*resilience, coping and salutogenic approaches to maintaining and generating health*”. The review was conducted on behalf of NICE by Cardiff Institute of Society Health and Ethics (CISHE) at Cardiff University.

The review is divided into two sections. The first section; ‘characteristics of approaches to maintaining and generating health’ aims to consider the theoretical frameworks used by research in this area, the approaches of researchers to these three areas and how these theories and areas of research have been applied to practice based interventions. The second section ‘evidence on approaches to maintaining and generating health’ considers the empirical evidence on the factors and processes thought to facilitate positive adaptation and the effectiveness of interventions and programmes engaged in generating these ‘protective’ resource and contexts.

In light of the breadth of the topic areas, and the fact that considering these areas in relation to public health and behaviour change is a relatively novel activity, the decision was made to focus on review-level literature. The advantages and disadvantages of this approach have been discussed elsewhere¹

In addition, due to the large and broad ranging volume of literature identified on resilience in the search it was necessary to impose further restrictions on our review by restricting the stressor-type or set of adverse/ risk conditions for the literature reviewed for Section Two. In the light of current debates and political and academic interest in health inequalities and the strong associations that exist between socio-economic status and health status, we therefore took the decision to concentrate the evidence section of this review on the positive adaptation of people despite conditions of social-structural adversity

Review aims

The two sections address the following questions:

Section One

1. What are the key theories and models of resilience, coping and salutogenesis used in contemporary research?
2. How have researchers approached these research areas?
3. How have these theories been applied in practice: what kind of initiatives are there and what are their core characteristics and rationales?

Section Two

4. What evidence has been produced on the positive adaptation of people despite conditions of social-structural adversity?

¹ See, for example, Swann, C, Naidoo, B & Kelly, M (2006) Evidence for public health practice: conceptual and methodological challenges. In A Killoran, C Swann & M Kelly (eds) (2006) Public Health Evidence: Tackling health inequalities. Oxford: Oxford University Press.

5. What evidence is there on the effectiveness of interventions engaged in generating contexts and resources which might facilitate coping, resilience and positive development among disadvantaged groups?

Review Methods

One comprehensive literature search was designed and carried out to identify systematic reviews, meta-analyses and other reviews and papers which provide information on the theories, research approaches and practice based interventions relating to the areas of resilience, coping and salutogenesis (for Section One), and also the evidence base relating to theory and practice in these three areas (for Section Two). Results from each database search were downloaded and imported into Endnote. The titles and abstracts were then examined according to pre-defined inclusion and exclusion criteria.

63 reviews met the inclusion criteria for Section One and 45 reviews met the criteria for Section Two. 7 of these reviews were also used in both sections, giving a grand total of 101. The reviews used for Section Two (the 'evidence' section) were then subject to a full critical appraisal to determine their quality. For the majority of the literature used in Section One, it was not considered to be appropriate or necessary to subject the literature to this process.

Section One: Results

This section draws largely on reviews which provide some kind of conceptual or theoretical overview or critical analysis of the literature. All of the literature used in this section was obtained through the searches described in the methodology section. With the exception of four systematic reviews, all of the reviews are traditional literature reviews or discussion papers. Some of the material used here is also used for Section Two, although the majority of papers included in Section One did not meet our inclusion criteria for Section Two. 37 papers provided overviews on resilience, 14 on coping and 12 on salutogenesis.

Q1: What are the key theories and models of resilience, coping and salutogenesis used in contemporary research?

Resilience

Definitions

There is considerable variation in how resilience has been conceptualised and defined. A 'most agreed upon definition' of resilience is proposed in one review which describes resilience as 'the "successful" adaptation to life tasks in the face of social disadvantage or highly adverse conditions.'

Background

The emergent area of resilience is suggested to have its roots in research on risk, stress and coping, and to have developed out of findings of 'resilient subgroups'. It is suggested that research in this area is popular because of its potential to identify

factors promoting resilience and, in turn, opportunities to enhance resistance to stress and adversity through interventions.

Concepts

Resilience has been variously defined as a trait, process or outcome, but some consensus is emerging on viewing resilience as a process. Positive adaptation and risk are two important constructs in conceptualisations of resilience. There is some consensus that for resilience to be inferred there must be positive adaptation despite the presence of significant risk. Protective factors are another central construct. Protective factors interact with risk to modify the effects of risk in a positive direction. Protective factors have commonly been identified at the individual level, the family level and the community level. Vulnerability factors are conceptualised in the literature as traits or indices that increase vulnerability to stress or exacerbate the negative effects of the risk condition

Conceptual issues and implications

There appears to be consensus that resilience should be seen as multidimensional and variable across time, circumstance and context. Several authors therefore recommended specificity when describing 'domains' of resilience (e.g. educational, emotional resilience). It was also recommended that the outcomes selected to infer resilience should be developmentally appropriate and appropriate to the type of risk condition.

Concerns have been expressed that the concept of resilience may lend itself to explanations that are 'victim blaming' and could be used politically to justify limited efforts to tackle poverty. The importance of seeing resilience as a process rather than a trait was stressed and a greater focus on the role of social institutions is recommended.

Coping

Definitions

A most widely adopted definition of coping is suggested to be that of Lazarus and Folkman (1984), which defines it as continually changing behavioural and cognitive efforts to manage external and/ or internal demands that are appraised as exceeding the individual's resources.

Background

Coping research is reported to have evolved from stress research, focusing on the processes and mechanisms by which people adapt to stress. This is suggested to be important for understanding health needs and problems, and developing strategies or interventions to prevent problems or improve health and well being.

Concepts

Three theoretical perspectives on coping were apparent in the literature; transactional, psychoanalytic and motivational

- The transactional approach

The transactional approach appears to be most commonly applied in relation to the concept of coping. This model suggests that (a) coping is a continuous and dynamic

process of person-environment interaction, (b) it fluctuates over time in response to changing demands and appraisal of the situation and (c) it is situation as opposed to person specific. Key stages in the coping process are: primary appraisal of the adverse event; secondary appraisal of coping options; and the use of coping strategies to manage the effect of the stressors or attempt to change the situation, perhaps with a final step of evaluation

Within this framework stress is conceptualised as a mismatch between the perceived demands of a situation and the individual's assessment of his or her resources to deal with these demands. Distinctions have been drawn between life events and daily hassles, controllable and uncontrollable stressors, acute stressors, ordinary stressors, unusual stressors and chronic stressors.

Coping resources are another key component the transactional approach as they are suggested to influence appraisals and coping responses. They are generally grouped into internal resources (e.g. problem solving skills) and external resources (e.g. social support).

Coping efforts or strategies are further important constructs in the transactional framework. They have been defined as cognitive and behavioural actions in a specific situation, which are intended to manage emotions or improve a problematic situation. Several slightly different descriptive models are highlighted, of which the most well known and widely discussed was the problem-focused/ emotion-focused dichotomy. Problem-focused coping efforts are aimed at modifying the stressor (e.g. via direct problem solving) and emotion-focused coping is aimed at regulating the emotional states that may accompany the stressor, or adapting to the stressor without altering it. Emotion-focused coping strategies are suggested to be more adaptive when an appraisal leads to the conclusion that nothing can be done to modify difficult conclusions, whilst problem-focused coping will be more adaptive when the situation has been appraised as amenable to change

- Dispositional approach

The dispositional or psychoanalytic approach was given some mention in the literature. Instead of seeing coping as a process of person-environment interaction, this model suggests stable, person based factors to underlie habitual coping efforts (e.g. personality, attitudinal and cognitive characteristics). These two approaches are not generally seen as incompatible insofar as dispositional approaches tap into general, preferred coping styles that transcend particular situational influences, whilst contextual approaches describe responses to specific stressful encounters and changes in coping efforts during a stressful encounter

- The motivational approach

The motivational approach was described in only a small section of the literature. From this perspective stress results from an assault on basic psychological needs of relatedness, autonomy and competence. Coping is therefore seen less about fending off the harmful consequences of stress than about peoples' efforts to fulfil these needs.

Conceptual issues and implications

Discussion was limited in this area but in its focus on process, the transactional framework has been criticised for a lack of attention to the content and character of particular stressors. Issues have also been raised regarding the applicability of adult coping models to children in relation to the categorisation of coping responses, and a lack of attention to the links between coping responses and adjustment.

Salutogenesis

Definitions and background

The salutogenic approach was developed as an alternative to pathogenic approaches and essentially grew out of Antonovsky's concerns that a different paradigm was required in order to research health, which was quite different from that which looks at the underlying processes of illness and disease. By focusing on salutogenesis, in contrast to pathogenesis, Antonovsky hoped that researchers might start to identify pathways and mechanisms leading in the direction of health. Salutogenic research therefore implies a focus on health maintenance processes rather than disease processes.

Concepts

'Salutogenesis' and its operationalised form, 'sense of coherence', are associated with the medical sociologist, Aaron Antonovsky. Antonovsky saw health-ease and dis-ease at two ends of a continuum. Salutogenic research looks at processes that move people towards, or keep people at, the health-ease pole. A Sense of Coherence (SOC) relates to the way in which human agents make sense of the world, use the required resources to respond to it and feel that these responses are meaningful and make sense emotionally. It has 3 elements; comprehensibility, which is the cognitive element and relates to the way in which the person sees the world, manageability, the instrumental element, and meaningfulness which refers to the way in which the person is motivated to think and act in these ways. General Resistance Resources are a key concept in understanding SOC; these resources may be internal or they may lie in the social environment, and could be material or non material in nature

Conceptual issues and implications

Although Antonovsky stresses the structural dimensions to resistance resources and the SOC, one issue which was raised was that the SOC construct can lend itself to explanations and interventions which are neglectful of the fact that people in poverty often have very limited control over their circumstances.

Q2: How have researchers approached the study of resilience, coping and salutogenesis?

Resilience

Area and focus of research

Research in the area of resilience has been broad ranging, exploring resilience in the contexts of poverty, abusive families, alcoholic families, homelessness, chronic illness/ disability, teen mother, juvenile delinquency. Most research has been carried out on children. Research is described to have shifted from a focus on identifying

outcome profiles of at risk groups to identifying and exploring protective factors associated with positive outcomes.

Methods and operationalisation.

The most common approach for resilience researchers is suggested to be a process of identifying vulnerability and protective factors that might modify the negative effects of adverse life circumstances and then identifying mechanisms or processes that might underlie associations found. This mostly involves the use of a quantitative scale correlated with outcome measures specific to the population and domain of resilience being studied. Qualitative methods are seldom used

There has been considerable variability in the measures chosen to investigate resilience e.g. secure childhood attachments, mental health, functional capacity, social competence, behaviour problems, drug abuse, and school failure. It is suggested that outcomes must be conceptually relevant to the risk encountered.

Issues and implications with research

The inconsistency in approaches to defining and operationalising resilience is suggested to cause confusion and undermine the comparability of study findings. Issues have been raised with regard to the arbitrary selection of outcome variables, which are said to reflect the normative assumptions and social values of dominant middle class groups. Increased attention to the social and cultural contexts of different groups is recommended.

With respect to the need to conceptualise resilience as multidimensional and variable across time and context there have also been calls for specificity regarding spheres of adaptation and multiple measures of risks and resources to be studied over longer time scales. A need was also highlighted for research to move away from listing variables associated with positive outcomes and to start exploring underlying mechanisms and processes of adaptation and protection. Interactive statistical models and qualitative research is suggested to be a way forward for identifying and exploring these mechanisms.

Minority groups are reported to have been underrepresented in research on resilience, and it is also suggested that research on resilience has focused too much on individual factors and has not paid enough attention to ecological contexts and structural influences on behaviours and adaptations.

Coping

Area and focus of research

It is explained how research carried out within a dispositional framework uses indices which focus on how individuals are inclined to cope generally with adaptive demands, whilst research on coping responses or skills focuses on understanding and measuring the coping responses that individuals employ in the context of specific stressful encounters. It is also noted that coping research has traditionally paid more attention to coping with life events, but increased attention is now starting to be paid to coping in the context of 'daily hassles'. Low SES and minority ethnic groups have been found to be under represented in coping research.

Methods and operationalisation.

Most coping research involves the almost exclusive use of checklists and questionnaires. Most research on coping has involved using standardised checklists and scales. Questionnaires associated with transactional perspectives ask respondents to report the coping response used in response to specific stressors, whilst dispositional questionnaires ask respondents to report what they characteristically do with stress.

Issues and Implications with research

Issues raised with methods of research include; inconsistency in the application of questionnaires and the inability of the questionnaires to gather specific data on the character of the stressors and coping responses, or to gather information on the social and environmental context of a stressful event and its meaning to the person. Idiographic methods, daily reports and qualitative methods are recommended as a way of gathering more contextualised and meaningful data.

Research on the coping of disadvantaged and minority groups is also suggested to be lacking, prompting calls and recommendations for research which investigates coping among youth from diverse disadvantaged groups.

Salutogenesis

Focus, methods and operationalisation.

Salutogenic research has primarily been concerned with identifying correlates of a Sense of Coherence, whilst also making some effort to control for identified risk factors. The primary method of data-collection seems to be through the use of standardised scales and questionnaires to obtain measures of Sense of Coherence and associations with other outcomes or variables of interest.

Issues and implications

Due to the limited number of reviews identified on the subject there was very limited discussion on issues and implications for research. However, it was noted that current scales measuring SOC are unable to measure how sense of coherence is shaped by historical and structural process of which individuals are a part, or how it may be reflected at a collective level. Antonovsky argued for other methods to be used alongside the scales, such as life histories and in depth interviews, which could better capture the complexities and provide better explanations for how SOC works in particular contexts.

Q3: How have these three theories been applied in practice: what kind of initiatives are there and what are their core characteristics and rationales?

Resilience

Interventions and approaches

Life skills training and social development models are two school based resiliency approaches that were commonly discussed. Life skills training is described as a classroom-based program that focuses on general adolescent skill development and on developing skills for resisting social influences to use substances. Social development

approaches are considered to be system centred and therefore to incorporate, but build, on person-centred strategies like life skills training. They typically involve efforts to enhance academic, cognitive and social skills, efforts to strengthen positive parenting practices and increase home-school bonding, and efforts to enhance participation, interaction and bonding with peers and adults in the Classroom and wider school environment

Other practice based approaches discussed with reference to resilience included parent-training programs, community focused programs, mentoring programs and family therapy and clinical approaches.

Issues and implications

For practitioners; the main issue identified with regard to resilience interventions was the problem of 'educational faddism', a term used to describe short term, add on programs. It is recommended that programs should be integrated, multi-faceted and sustainable and should focus on building support as well as skills. For policy several authors stressed a need for greater attention to structural influences in communities. For research, a need for more rigorous and comprehensive evaluations of interventions was highlighted.

Coping

Interventions and approaches

Three basic types of coping interventions are identified; the first type of intervention is aimed at teaching general skills which should improve children's ability to cope effectively when they encounter specific stressful events. The second kind of intervention is typically focused on what children think and do to handle demands of specific situations that threaten their wellbeing, the third type is focused on enhancing support e.g. through parent-training and family focused interventions.

Issues and implications

Recommendations were made for more rigorous, comprehensive and theoretically driven evaluations of interventions. No implications for policy or practice were explicitly identified in the literature used for this section.

Salutogenesis.

Interventions and approaches

Two types of intervention approaches were discernable in the literature; approaches aimed at strengthening resources (e.g. self-management skills, community networks) and approaches aimed at creating meaning and order (e.g. interventions to increase perceptions of control and therapy interventions)

Issues and implications

One author commented on the lack of evidence on what works with regard to interventions targeting parenting style associated with positive health. Another author suggests that interventions which focus on individual level factors such as control, without changing the external environment, could lead to frustration, more feelings of powerlessness and more ill-health. The author recommends that interventions should therefore also target environmental and community level factors.

3.3: Section Two: Evidence on approaches to maintaining and generating health.

Q4A: What evidence is there on protective factors and processes that moderate or mediate relationships between structural disadvantage and developmental outcomes?

Evidence on protective factors or processes was provided in 39 reviews. This evidence was mostly derived from data from longitudinal and cross sectional studies, which identified factors associated with positive outcomes. 23 of these reviews were framed within a resilience framework, 5 within a coping framework, and 3 with reference to salutogenesis. Others reviews were located in ecological, transactional, empowerment, social support and self-efficacy theories.

A range of outcomes was used in studies across the different reviews. These included measures of psychological adjustment, mastery of developmental tasks, success at school, avoidance of problem behaviour, mortality and morbidity rates, physical health outcomes, mental health outcomes and health behaviours. As a result of our inclusion criteria all of the reviews used provide evidence on adaptation or positive development despite conditions of social-structural diversity. Generally this was done either through concentrating specifically on disadvantaged groups (27 reviews) or through controlling for SES in wider population based studies (112reviews).

Only 6 of the reviews used for this question met the minimum four criteria to qualify as ‘weak’ systematic review, with the remainder of the evidence base (33) relying upon traditional literature reviews (TLR) considered to be ‘very weak’.

In spite of the weak evidence base there is considerable consistency across review findings, with most reviews distinguishing between protective factors at the individual level, family level and community level, and with clusters of factors observable within these broader levels of influences.

Individual factors

The identified protective factors have been grouped into the following categories; ‘positive identity factors’ (e.g. self concept/ self esteem/social/ethnic identity), ‘global beliefs’ (e.g. religious beliefs, optimism, achievement motivation), ‘control beliefs’ (e.g. self efficacy, locus of control), ‘personality traits’ (e.g. temperament) and ‘skills and capabilities’(e.g. intelligence, social skills). It is important to note that these categorisations are only to aid clarity and should be thought of as overlapping and interrelated as opposed to distinct.

Positive identity factors

There is evidence from 7 studies that high self-esteem and positive self concept are protective against the effects of adversity and promote positive outcomes. There is evidence from 7 reviews that a positive ethnic or racial identity is protective against the effects of adversity for minority ethnic groups.

Global beliefs

There is evidence from 2 reviews that religious beliefs function as an individual level protective factor. Evidence provided on other 'outlook' or 'orientation' factors included positive orientation to one's surroundings, optimism, high educational expectations and strong achievement motivation.

Control beliefs

There is evidence from 6 reviews that an internal locus of control is protective against the effects of adversity. However evidence from 3 reviews suggests that locus of control may not contribute to resilience among black students. There is evidence from 2 reviews that maternal self efficacy is protective against the effects of adversity.

Personality traits

There is evidence from 3 reviews that an easygoing temperament is protective against the effects of adversity.

Skill and capability factors

There is evidence from 8 reviews that the following skill and capability factors are protective against the effects of adversity; general and social competence (4 reviews), social skills (4 reviews), intelligence and academic skills (5 reviews), cognitive skills and processes (3 reviews), problem solving abilities and coping skills (5 reviews). However, there is some contradictory evidence reported in one review which suggests that intelligence could also serve as a vulnerability factor for high risk, inner city adolescents.

Family factors.

Consistent findings on protective factors were also evident at the family level. The identified protective factors seemed to fall into the following categorisations: Supportive environments (e.g. parent-child attachments, intra-familial relations, kinship networks), family practices (e.g. parenting approaches, norms and values) and resources. Again, these groups should be thought of as overlapping and interrelated rather than distinct.

Supportive environments

There is evidence from 18 reviews that a supportive family environment is protective against the effects of disadvantage. More specifically: there is evidence from 7 reviews that strong parent-child relationships affect adjustment. There is evidence from 9 reviews that cohesive, warm, supportive and communicative family environments are protective against the effects of disadvantage. There is evidence from 8 reviews that extended kinship networks are protective against the effects of adversity. 1 review provided evidence that the effects of kinship networks are mediated by the provision of goods, services and socio-emotional support.

Family practices

There is evidence from 3 reviews that nurturing and supportive care giving is protective against the effects of poverty. There is evidence from 5 reviews that nurturing motivation, high expectations and support for achievement is protective against the effects of poverty. There is evidence from 12 reviews that the following practices are protective against the effects of poverty: encouraging participation in family life and assigning chores (3 reviews); structured parenting, consistently

enforced rules and discipline (3 reviews); authoritative parenting (5 reviews) and strong parental supervision and monitoring (6 reviews)

There is evidence from 3 reviews that the process of 'ethnic socialization' helps minority ethnic children to develop a positive identity and helps them to cope with the effects of racism and discrimination. There is evidence from 1 review that an emphasis on autonomy with emotional support from the primary caregiver is more effective for girls, whilst for boys an emphasis on structure and rules is more effective.

Physical and human resources

There is evidence from 4 reviews that human resources, such as mother's education and maternal competence, and physical space and size of family, moderate the impact of disadvantage on children's adjustment

Community factors

Consistent findings on protective factors were similarly evident at the community level. 14 reviews provided evidence on the buffering or moderating effect of social networks and social support in relation to disadvantage and a wide range of outcomes. More specific evidence was also identified on the likely mediators of community effects, which could again be categorised into overlapping and inter-related groups and subgroups; 'psycho-social effects' (felt social support/cohesion and sense of belonging), 'collective efficacy' (informal supports, collective action) and 'cultural norms'.

There is evidence from 11 reviews that social networks influence psychosocial factors which are important to wellbeing. These factors include; emotional support and caring (6 reviews) and a sense of belonging and connectedness (5 reviews). There is evidence from 6 reviews that social networks provide informal supports and aid collective efficacy, which can contribute to a 'common good.' There is evidence from 5 reviews that strong community networks can foster cultural norms which contribute positively to development and health behaviours.

There is evidence from 4 reviews that the structural characteristics of disadvantaged neighbourhoods moderate the relationship between disadvantage and community characteristics such as social networks and the level of community organisation.

There is evidence from 4 reviews of the important role played by human services and institutions which afford opportunities for participation.

School factors

Evidence on the role of schools in fostering educational resilience, student achievement, attendance and persistence, 'resilient functioning' and reduced substance use and problem behaviours was variously provided in 13 reviews. Of these reviews there is evidence from 6 reviews that school factors can be protective against the effects of disadvantage. Evidence was also provided on features and characteristics of schools which promote resilience among students from disadvantaged backgrounds. These features were commonly grouped into classroom practices and school climate. There is evidence from 4 reviews that classroom

practices can promote educational resilience. High teacher expectations and opportunities for learner engagement and participation were identified as particularly important here. There is evidence from 5 reviews that the school environment can promote educational resilience. Opportunities for student participation in school life and positive social interactions among peers and with teachers were identified as particularly important.

Religion

There is evidence from 7 reviews that religious involvement or religiosity contributes to a range of positive outcomes. There is limited evidence from 1 review that health practices may partially mediate the effects of religious involvement, and from 2 reviews that a Sense of Coherence may act as a mediator.

Q4B: What evidence is there on the processes and mechanisms underlying adaptation and coping?

The above section has highlighted evidence on protective factors which are associated with resilient functioning and which are theorised as providing individuals with resources that enable successful coping and adaptation. The other main evidence base that this review sought to explore was on the processes of person-environment interaction.

For this section empirical reviews were used which provide evidence on processes of person-environment interaction leading to adaptive psychological and behavioural responses. Only 7 relevant reviews were identified which answer this question, including 1 Systematic Review. The evidence base here includes evidence from 2 reviews that coping responses are context dependent and are influenced by appraisals of controllability, and evidence from 5 reviews that adaptation occurs through complex processes of person-environment interaction and that apparently maladaptive behaviours may serve adaptive purposes when they are located in their wider contexts. This suggests the importance of considering context and meaning when seeking to understand ‘successful’ and ‘unsuccessful’ adaptations.

Implications identified for research

A strong criticism and issue in the Section One literature was the need to move away from simply listing variables associated with resilience, to explore the underlying mechanisms of protection. The need for greater attention to the specific social and cultural contexts in which coping and adaptation occurs was emphasised in 10 reviews and there were recommendations from 2 reviews for research exploring processes of person-environment interaction.

In 9 reviews calls were made for increased attention to the sampling of minority ethnic and religious groups and other recommendations for areas of research included; research into support networks and neighbourhood resources, research into relationships, research into the role of schools and empirical evaluations of interventions. In terms of measures there were recommendations in 5 reviews for the use of idiographic approaches, mixed method ethnographic research, longitudinal studies and qualitative research and recommendations in 9 reviews for multivariate

studies which evaluate multiple outcomes, contexts and moderators, and in particular for studies which account for gender, SES and ethnicity

Implications for practice

Most of the reviews used in this section made recommendations for interventions, programs or approaches. Some of these recommendations were targeted at school approaches, whilst others were focused on community settings. With regards to schools there were recommendations in 5 reviews for more inclusive school approaches and there were recommendations in 2 reviews for skill related programs. With regards to community based interventions there were recommendations in 6 reviews for interventions which build social support and social networks and there were recommendations in 5 reviews for family focused interventions.

Implications for policy.

In line with some of the comments made in Section One, one author called for policy level attention to be given to macro-structural influences such as unemployment, discrimination, and warned against focusing only on micro-level influences, for example, social support, which may be limited in the extent to which they can mitigate the effects of poverty

Q5. What evidence is there on the effectiveness of interventions engaged in generating contexts and resources which might facilitate coping/ resilience/ or other positive developmental outcomes among disadvantaged groups?

Only 6 reviews met our inclusion criteria for this section. More reviews of relevant interventions were retrieved in the search, and some of these reviews were used in Question Three to map out the different types of interventions related to resilience, coping and salutogenesis. However, for this question on effectiveness only systematic reviews or meta-analyses which met the four minimum criteria were included. The other main cause of exclusion of otherwise relevant systematic reviews was that many did not provide information on the backgrounds and characteristics of study participants, meaning that it would not be possible to draw conclusions on whether these interventions or programs are effective for disadvantaged groups.

One of the reviews was scored as ++, three reviews scored as +, and two scored as -. Four of the reviews reviewed evidence from Randomised Control Trial or 'quasi-experimental' studies and one was a review of systematic reviews. The best available pieces of evidence retrieved for the other remaining review were descriptive case studies of schools with 'good practice', with the result that no conclusions on effectiveness could be drawn.

The reviews differed quite considerably in terms of the aims and objectives of the interventions, the components of the interventions and the outcomes used to assess effectiveness. The topics of the different reviews included: mentoring programs, inclusive and participatory education, coping interventions, interventions targeting

social exclusion to prevent unintended teenage pregnancy, programs designed to promote family wellness and prevent child maltreatment and drug use prevention. What they shared in common was some kind of focus on one or more of the protective resources identified in Question Four, for example, developing coping skills or strengthening relationships and social support. They also obviously provided evidence on the effectiveness of the interventions for disadvantaged groups.

Skills training; children and young people

There is some evidence from 3 reviews (1&2 ++, C; 1&2 ++, C; 1&2-, C) that programs which build social and cognitive skills can enhance positive outcomes. Outcomes used to measure effectiveness included; pregnancy rates, academic achievement, employment, attitudes to school, college attendance, behaviour problems, teenage pregnancy and social competence measures and reduced prevalence of drug use. However, two of these reviews also suggested weaknesses or limitations with some of the evidence used.

Mentoring: role modelling and relationships

There is evidence from 1 review (1&2-, C) that mentoring programs can impact positively on emotional/ psychological measures, measures of problem-high risk behaviour, and social competence, academic and career related measures. However, the overall effect size was small but variable between studies.

Family focused interventions.

There is evidence from 2 reviews (1&2-, C; 1&2+, C) that family focused interventions aimed at building family strengths and resources can be effective in enhancing 'family wellness' and can impact positively on college attendance, behaviour problems, teenage pregnancy and social competence measures.

Inclusive school environments.

1 review (3+, A) found no outcome evaluations which could produce data on the effectiveness of inclusive school approaches in the UK.

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1.0 INTRODUCTION

This review is one of five commissioned by The National Institute for Health and Clinical Excellence (NICE) in response to the Department of Health's request for public health programme guidance on supporting knowledge, attitude and behaviour change.

The other four reviews all focus on aspects of behaviour change, looking at the different theories applied to behaviour change in public health, the wider determinants of behaviour, the evidence for effectiveness of different approaches, and evidence on behaviour change from the fields of road safety, environmental behaviour, and marketing and advertising to low-income consumers..

This review was commissioned in order to examine the evidence on approaches to generating and maintaining health, as opposed to changing health behaviours. It has a particular focus on studies of resilience, capability and coping, and the effectiveness of interventions that are aimed at fostering the personal and social conditions within which 'salutogenesis', as a process of generating positive health or well being, is possible and optimal. It is centrally concerned with 'salutogenesis' (Antonovsky, 1979): the processes of health generation and maintenance, and the conditions which support or impede such processes.

All of the reviews commissioned by NICE as part of this programme are dealing with complex areas of investigation. However, we believe that there is an additional complexity to this review arising out of the kind of material which the search strategy has uncovered. A great deal of this material comes from conventional (ie. narrative type) reviews of conceptual and theoretical discussions and arguments relating to the generation and maintenance of health. This is in contrast to some of the other reviews' more conventional focus on interventions and their effectiveness. Inevitably, therefore, the conventional rules for how to present 'evidence' have had to be adapted to the material that this review has uncovered.

This review covers a range of different disciplines and encompasses a variety of theoretical arguments, interventions, methodologies and approaches to evaluation. Our understanding of the terms: 'A review of the evidence on approaches to generating and maintaining health...' has led us to spend at least as much time reviewing theoretical discussions of 'approaches to generating and maintaining health'. Within such a framework we have reviewed relevant literature from a wide range of disciplines and interdisciplinary fields of study.

As will be made apparent in the discussion in Section One of the report findings, the areas of resilience, coping and salutogenesis share in common a focus on the processes, factors and contexts which enable people to adapt and 'stay well' despite difficult circumstances and life experiences. Research on resilience concerns 'the "successful" adaptation to life tasks in the face of social disadvantage or highly adverse conditions' (Windle 1999). Coping is generally understood as continually changing behavioural and cognitive efforts to manage external and/ or internal demands that are appraised by the individual as exceeding their resources. The concept of 'salutogenesis' has been developed to address the issue of why it is that

some people, against all the odds, remain healthy in situations of stress or adversity. (Hansson & Cederblad 2004)

The question of how and why some people overcome adversity is an important one. Research which seeks to find answers to these questions offers potential insights into the processes of adaptation, and the contexts and resources that facilitate positive adaptation. Such findings hold promise for strengthening our understandings of the various life choices we make and the pathways or 'life orientations' that we pursue (Antonovsky, 1979). Moreover, in identifying contexts and resources that appear to mitigate some of the effects of adversity and to facilitate positive adaptation, this area of research should highlight important opportunities for interventions to strengthen salient 'resources' and enhance resistance to stress and adversity.

The review is divided into two sections. The first section - 'characteristics of approaches to maintaining and generating health' - aims to consider the theoretical frameworks used by research in this area, the approaches of researchers to these three areas and how these theories and areas of research have been applied to practice based interventions. The second section - 'evidence on approaches to maintaining and generating health' - considers the empirical evidence on factors and processes thought to facilitate positive adaptation, and where possible the effectiveness of interventions and programmes engaged in generating these 'protective' resource and contexts.

The two sections address the following questions:

Section One:

1. What are the key theories and models of resilience, coping and salutogenesis used in contemporary research?
2. How have researchers approached these research areas?
3. How have these theories been applied in practice: what kind of initiatives are there and what are their core characteristics and rationales?

Section Two:

4. What evidence has been produced on the positive adaptation of people despite conditions of social-structural adversity?
5. What evidence is there on the effectiveness of interventions engaged in generating contexts and resources which might facilitate coping, resilience and positive development among disadvantaged groups?

The review begins with a description of the methodological parameters of the review dealing in turn with the process of literature searching; a description of how decisions about what to include were made; the appraisal process and scoring of the evidence; and finally data extraction and synthesis. The findings are presented in two sections: the first on the characteristics of approaches to generating and maintaining health, and the second on evidence on approaches to generating and maintaining health. Finally the conclusions are drawn and implications discussed. Relevant supporting and supplementary material can be found in the appendices.

2.0 METHODOLOGY

This rapid review was based on a systematic search for reviews, published since 1990. The first task that was completed in preparing the search strategies was to map out key terms that would enable us to identify literature appropriate to our research questions.

One combined search was carried out to identify literature for sections 1 and 2, although there were some fundamental differences in terms of the literature targeted to answer these questions. These differences in the target literature are reflected in the selection of key words, the different sets of inclusion criteria and our approaches to appraisal and the reporting of findings.

Section One is focused specifically on the areas of resilience, coping and salutogenesis and reviews the theoretical frameworks used by research in this area, the approaches of researchers to these three areas and how these theories and areas of research have been applied to practice based interventions. As a result, the anticipated target literature for this section was traditional narrative reviews or discussion papers that provide an overview or critical analysis of concepts, research practices and practical applications specifically relating to resilience, coping and salutogenesis. The key words chosen for this section were therefore specific to these three theoretical areas.

In Section Two, Question Four is focused on empirical evidence relating to the factors and processes which contribute to positive adaptation; and Question Five is focused on the effectiveness of interventions and programmes engaged in generating these 'protective' resources and contexts. Ideally, the target literature for both of these questions is systematic reviews and meta-analyses; along with observational studies for Question Four and controlled trials for Question Five. However, due to an anticipated dearth of systematic reviews of the kind of observational studies required for Question Four, traditional literature reviews were also targeted and retained for inclusion for this question.

In order to generate as much evidence as possible, the search terms and inclusion criteria were expanded beyond the boundaries of our three theoretical areas and a wide range of context and 'influences' terms were used, along with more general adaptation and development terms. The review filter used was broad in scope and included words targeted at narrative and theoretical reviews as well as systematic reviews and meta-analyses.

It should also be noted that this is a 'reviews of reviews.' Reviews of reviews are a useful way of bringing together a large body of information, in particular where the area of interest is relatively uncharted and is potentially very broad in its scope. The examination of these three topics in the context of behaviour change in public health is a novel activity and a key aim in Section One was to map out and describe the area in detail. A review of reviews was therefore a natural starting point for this project. Had fewer reviews been identified in the search, or had time and resources permitted, we would have moved on to primary data to fill in the 'gaps.' However, due to the considerable number of relevant reviews that were identified, and the limited time and resources available for this review, a decision was made to stay at review level. The

advantages and disadvantages of this approach have been discussed elsewhere² but in this case conducting a ‘tertiary’ level review allowed for as comprehensive a map of these three significant areas as resources allowed.

In fact, such a large and broad-ranging volume of literature on resilience was identified in the search (eg resilience following cancer treatment, resilience in the wake of natural disasters), that it was necessary to impose further restrictions on our review by restricting the stressor-type or set of adverse/ risk conditions for the literature reviewed for Section Two. In the light of current debates and political and academic interest in health inequalities, and the strong associations that exist between socio-economic status and health status, we took the decision to focus the evidence section of this review on the positive adaptation of people despite conditions of social-structural adversity

The processes for this review are taken from the NICE manual ‘Methods for development of NICE public health guidance’ (NICE, 2006).

This methodology section is organised into the following areas; Literature search, databases searched, selection of reviews for inclusion, quality appraisal and bias scoring, applicability, data extraction and synthesis, evidence statements, overview of results.

2.1 Literature search

One literature search was then carried out for both sections using a combination of key words and subject headings specific to each database. The words were grouped into 2 sets and then combined with a review filter; the words within each set were combined using OR and the two sets and the review filter were combined using AND (see appendix 2 for example strategies). Searches were limited to reviews, published in English with a focus on western societies, and dated from 1990 onwards.

2.2 Databases searched

The following Databases were searched;

- ASSIA (Applied Social Science Index and Abstracts)
- CINAHL (Cumulative Index of Nursing and Allied Health Literature)
- Database of Abstracts of Reviews of Effectiveness (DARE)
- EMBASE
- ERIC
- Medline
- PsychINFO
- Sociological abstracts
- Cochrane Reviews Database

² See, for example, Swann, C, Naidoo, B & Kelly, M (2006) Evidence for public health practice: conceptual and methodological challenges. In A Killoran, C Swann & M Kelly (eds) (2006) Public Health Evidence: Tackling health inequalities. Oxford: Oxford University Press.

In addition, searches were carried out on Zetoc, Trip, Health Evidence Bulletin Wales, NCCHTA website, NICE website, National Research Register, Clinical Evidence, EPPI-Centre Website, Department of Health Website, and HDA evidence briefings.

2.3 Selection of reviews for inclusion

Titles were screened and irrelevant titles discarded. The remaining abstracts and papers were reviewed by two reviewers against two sets of inclusion/exclusion criteria; Section One criteria and Section Two criteria, and differences of opinion regarding inclusion/exclusion were resolved by discussion.

Inclusion criteria: Section One

For the first section on ‘characteristics of approaches’ reviews were included if they provided an overview of conceptual, theoretical or research issues on the topics of resilience, coping and salutogenesis, or if they provided examples of interventions explicitly linked to one of these theories. Because the aim of this section was to provide an overview of the area rather than an assessment of evidence, it is not intended to provide an exhaustive account of reviews in the area. This meant that slightly different steps were taken for the inclusion of reviews than those followed for Section Two. During the initial process of assessing articles for inclusion for this section, articles were graded into three levels on their potential contribution (eg length of discussion, unique perspective). When synthesising the findings we began with the ‘top grade’ of papers and then moved downwards. As we progressed with this process, we included information from remaining articles only if they contained a previously unmade or weakly supported point.

Inclusion criteria; Section Two

For Section Two the following inclusion criteria were applied:

- Is a review of empirical evidence relevant to the topic area of positive adaptation despite conditions of social-structural adversity.
- For a review to be included it had to meet at least one of the criteria in each of the following boxes:

1 a) Evidence on factors and processes which contribute to positive adaptation or some kind of positive outcome.

OR

1b) Evidence on the effectiveness of practice based approaches engaged in generating resources and contexts which might facilitate coping/ resilience or any other positive developmental outcome.

AND

2a) Considers socially disadvantaged groups or responses to socially disadvantaged conditions.

OR

2b) Socio-economic status (SES) is considered as a key variable.

OR

2c) The focus of the review is on psychological/ cognitive processes which are described as leading to adaptive psychological or behavioural responses and no social variables are observed.³

³ In order to maximise the evidence on coping or adaptive processes it was decided that this type of ‘process’ focused study need not necessarily have considered socially disadvantaged groups or controlled for SES.

Exclusion Criteria for Section Two

- Do not consider reviews where the dominant risk condition/ adversity under consideration is not a normative experience of socially disadvantaged groups in general (eg homelessness, refugees).
- No inferential evidence; that is factors leading to negative developmental outcomes eg a paper exploring the relationship between low self esteem and delinquent behaviour.

2.4 Quality appraisal and bias scoring

Potentially relevant reviews were assessed for quality using a checklist adapted from Appendix A.1 of the NICE ‘Methods for the development of NICE public health guidance’ (see appendix 6). Reviews were graded on the quality of the review itself (e.g. likelihood of bias) and for the type of evidence reviewed (e.g. RCTs, non-RCT evaluations, non-evaluation studies). To ensure consistency, one researcher appraised all of the reviews and a 20% sample of reviews was blind appraised by two other researchers to check for bias in the process. The agreement level between researchers exceeded 90% which meant that no further checking was required. Disagreements on disputed papers were resolved by discussion between the researchers.

Bias scoring

Once data had been extracted on quality criteria, the quality of the reviews (in particular the likelihood of bias) was classified into three levels using guidance in the NICE ‘Methods for the development of NICE public health guidance manual’ (section A.2.10). The criteria used to determine the classification of the three categories is shown in the table below. Criteria were considered to be unfulfilled if (a) this was clearly stated (e.g. restricted to English language papers only), (b) a characteristic was not described, or (c) if not enough detail was provided to make a decision.

Criteria	++	+
1. Was there a focused aim or research question?	Yes	Yes
2. Explicit inclusion / exclusion criteria	Yes	Yes
3. More than 1 assessor / selector	Yes	
4. Provide details of databases searched	Yes	Yes
5. Lists years searched	Yes	Yes
6. Followed up references in bibliographies	Yes	
7. Experts consulted for further sources		
8. Grey literature included / searched		
9. Specified search terms / strategy	Yes	Yes
10. Not restricted to English language papers only	Yes	
11. Quality assessed	Yes	Yes
12. Data supports conclusions	Yes	Yes

Figure 1: Criteria used to determine the potential for bias

Notes:

- ++ must *at least* meet the 10 criterion indicated above.
- + must *at least* meet the 7 criterion indicated above.
- did not meet the 7 criterion necessary for + classification, but met a minimum of 4 criterion to qualify as a weak systematic review.

Given the different focus of the research questions addressed by this review, and what became a very apparent lack of systematic reviews in certain areas, the decision was taken to include traditional literature reviews as evidence in some cases.

The research questions in Section One were concerned with mapping and describing areas of work rather than reporting on effectiveness, and here it was also apparent that systematic reviews were unlikely to contain the necessary evidence and information to allow the review team to address these questions. Subsequently, it was decided to include traditional ‘narrative’ or literature reviews to answer these questions, and although a small number of systematic reviews and meta-analyses have been included, ‘traditional’ or narrative reviews constitute the main data pool here. An additional quality ‘score’ of TLR (traditional literature review) was applied.

For Section Two, Q4 also drew upon the whole range of included literatures (TLRs, systematic reviews and meta-analyses, where available), and Q5 – concerned with effectiveness – drew only upon systematic reviews and meta-analyses that met the minimum four criteria. This was to minimise the likelihood of bias.

The four scores used in this review are indicated below.

++	All or most of the criteria have been fulfilled.
+	Some of the criteria have been fulfilled.
–	Did not fulfil the criteria for a very high quality systematic review, and are of variable quality.
TLR	Traditional Literature Review (non-scorable).

Figure 2: Grading and interpretation of bias scores

Evidence scoring

The systematic reviews were also scored for the type of evidence included in the review. The classification system used is described in figure 3 below.

Classification	Type of evidence
1	Systematic reviews of RCTs
2	Systematic reviews of individual, non-RCTs, case-control studies, cohort studies, controlled before-and-after (CBA), interrupted time series (ITS), correlation studies
1&2	Systematic reviews of both RCTs and non-RCTs, case-control studies, cohort studies, controlled before-and-after (CBA), interrupted time series (ITS), correlation studies
3	Systematic reviews of non-intervention or evaluation studies eg quantitative observational studies, qualitative studies.

Figure 3: Types of reviews

The classification of bias (e.g. ++) was then combined with the type of evidence (e.g. 1, to become 1++) to give a level of evidence similar to that outlined in table 4.1 of the NICE ‘Methods for the development of NICE public health guidance manual.’ These are adapted from the Scottish Intercollegiate Guidelines Network (2001).

2.5 Applicability

In addition to the quality rating and classification, each systematic review and meta-analysis was scored for its likely relevance and applicability to the UK setting (see figure 4 below). Traditional literature reviews (TLRs) were not scored for applicability, because information on the studies used in the reviews was generally insufficient to enable this formal assessment. However, in the evidence tables the likely origins of studies are suggested based on the location of the authors' university.

Score (A-D)	Description
A (directly relevant)	Review includes UK studies
B (probably relevant)	Review includes non-UK studies that would be most likely to equally apply to UK settings (eg exercise interventions)
C (possibly relevant)	Review includes non-UK studies that may have some application to UK settings but should be interpreted with caution. There may be strong cultural or institutional differences that would have impact on the effectiveness of the intervention if applied in the UK (e.g. studies exploring experience and perspectives, psychosocial interventions)
D (not relevant)	Review includes non-UK studies that are clearly irrelevant to UK settings (e.g. legislation which would be unlikely to be implemented)

Figure 4: Applicability scores

2.6. Data extraction & synthesis

Data was then extracted from the reviews into an Excel database.

For systematic reviews and meta-analyses used to address research questions in Section Two, data extraction was guided by the forms in Appendix D of the NICE 'Methods for the development of NICE public health guidance manual', although this was adapted to suit a review of reviews and the requirements of the topic area. For the remaining literature, relevant data was extracted directly into templates to aid synthesis, and summaries for each review were also entered into the Excel database (see examples in appendix 6). All of the reviews reported in the findings section are summarised in the evidence tables at the end of the document.

A key aim for Section One was to identify and describe salient concepts, practices and issues relating to the three areas. In order to report this data in an appropriate manner, a thematic analysis and synthesis of the key points made in the included reviews was undertaken, which treated all of the included reviews (TLRs, systematic reviews and meta-analyses) as narrative accounts rather than quantifiable records of effectiveness. Similarly, because a key aim for Question Four was to identify and consider observational evidence on the key factors and processes linked to positive adaptation, the reviews used for this section were also broken down into thematic areas - for example by type of factor - and the data then synthesised into a narrative account.

Although this means that less information on each TLR is provided in the main text than for each systematic review, the review team felt that this approach provided the most appropriate and clear presentation of the types of factors identified in the

literature, and the range of evidence for each factor. Further information on each review is provided in the evidence tables.

2.7 Evidence statements

Reviews carried out to inform NICE guidance usually include ‘evidence statements’ that summarise findings in relation to particular research questions, and give a clear indication of the quality of the evidence used to make a statement, its applicability to the UK, and the likelihood of bias.

Section One of the findings for this review for the most part did not include evidence that could be rated for quality, bias and applicability in the same way that systematic reviews, meta-analyses and so on can be clearly graded. Where systematic reviews and meta-analyses were included here, it was for their narrative accounts of the concepts and factors and not for their evidence on effectiveness. Therefore, it was not considered appropriate by the review team to develop evidence statements in this section. Instead, for Section One ‘summary statements’ were developed to synthesise key points in the literature under each subheading. An example is given below:

Summary point 1

There is considerable variation in how resilience has been conceptualised and defined. A ‘most agreed upon definition’ of resilience is proposed in one review which describes resilience as ‘the “successful” adaptation to life tasks in the face of social disadvantage or highly adverse conditions’ (Windle 1999)

For Section Two, summary points have been used where the relevant evidence comes from TLRs alone. Where systematic reviews and meta-analyses are also included, evidence statements have been developed based on the level of evidence and the applicability of the findings to the UK. The evidence statements are based on the guidance in the NICE ‘Methods for the development of NICE public health guidance manual’ (section 4.4). An example is given below:

Evidence statement 2

There is evidence from 7 reviews that a positive ethnic or racial identity is protective against the effects of adversity for minority ethnic groups (Samaan, 2000, 3- C; Williams et al 2003; 3- C; Gonzales & Kim 1997; Szalacha et al. 2003, Villenas & Deyhle 1999; Wallace 1999; Yoshikawa & Seidman 2000)

2.8 Overview of results

A total of 9,173 results were identified by the initial literature search (see appendix 3 for a full flow-chart of results). Title screening for relevance allowed 7,250 results to be discarded, and abstracts of the remaining results were screened against the inclusion / exclusion criteria described in section 2.3. Based on the results of this screening, 347 reviews were selected and requested for full appraisal, however only 278 reviews were obtained in time to be included here. Of these 278 reviews, 101 were then selected for inclusion in this review, and 177 were excluded.

Reviews were excluded from Section One for the following reasons:

- The paper was not discussing or making reference to resilience, coping or salutogenesis
- The paper met the criteria but was not providing any new or weakly supported points or examples and there was therefore little to be gained from including it.

Reviews were excluded from Section Two because:

- The paper was not a review of empirical evidence
- The paper failed to explicitly report data on the socio-economic characteristics of participants or was not focused on low socio-economic groups;
- The dominant risk condition considered in the paper was not a normative experience of socially disadvantaged groups in general
- For reviews of interventions, the review did not meet the minimum criteria to qualify as a systematic review.

A breakdown of reviews included is given below.

Section	Type of Reviews	Number
1	TLR	58
	Systematic review	4
	Meta-analysis	1
		Total for Section One: 63
2	TLR	33
	Systematic review	9
	Meta-analysis	3
		Total for Section Two: 45
		GRAND TOTAL: 101⁴

Figure 5: Included reviews by section and type

⁴ 7 reviews were used in both Section One and Section Two, hence the discrepancy between the sum of the two sections and the grand total.

3. FINDINGS

3.1 Overview

The findings section of this review is divided into 2 parts. The first section - 'characteristics of approaches to maintaining and generating health' - aims to report on the theoretical frameworks and approaches used by research in these areas, and ways in which these theories and areas of research have been applied to practice based interventions. The second section - 'evidence on approaches to maintaining and generating health' - considers the empirical evidence on the contexts and processes thought to facilitate positive adaptation and where possible the effectiveness of interventions and programmes engaged in generating these 'protective' resources and contexts.

3.2 Section One: Characteristics of approaches to maintaining and generating health

The research questions addressed in this section are:

1. What are the key theories and models of resilience, coping and salutogenesis used in contemporary research?
2. How have researchers approached these areas?
3. How have these theories been applied in practice: what kind of initiatives are there and what are their core characteristics and rationales?

All of the literature reported in this section was identified through the search and appraisal processes described in Section Two. For the most part, this literature consists of 'traditional' or narrative reviews (TLRs) and discussion papers that provide some kind of conceptual or theoretical overview or critical analysis of the literature. Although four systematic reviews and one meta-analysis have been included here, all 'data' (information provided in the reviews) has been treated as narrative accounts of the concepts under consideration, rather than quantifiable reports on effectiveness.

38 reviews (36 TLRs, 1 systematic review, 1 meta-analysis) provided information on resilience, 14 (12 TLRs, 2 systematic reviews) on coping and 12 (11 TLRs, 1 systematic review) on salutogenesis. 1 paper provided information on both resilience and coping, giving a grand total of 63 reviews included in this section. Where systematic reviews and meta-analyses are reported here, their relevant quality and applicability scores are given. Otherwise, all reviews reported in the text are TLRs.

Findings are reported in the form of a narrative synthesis, themed around key concepts and questions. Each of the three topic areas is considered individually for each question in the order: resilience, coping and salutogenesis. To aid comparability, common sub-headings have been used within each question. A brief overall summary which brings together the three literatures is provided at the end of the section.

Q1: What are the key theories and models of resilience, coping and salutogenesis used in contemporary research?

In addressing this question, a total of 28 reviews (all TLRs) were identified on resilience, 12 (all TLRs) on coping and 10 (9 TLRs, 1 systematic review) on salutogenesis were identified.

These areas are considered separately and are organised into the following subheadings; definitions, background and rationale, concepts, emerging areas and conceptual applications, issues and implications. It should be noted that this last subsection is reporting solely on the issues and implications identified in the literature, rather than our own interpretation of the literature.

Q1A: Resilience

Definitions

The diversity and complexity of definitions, concepts and approaches used by researchers in the field of resilience is widely recognised by those working in the field, and evident in the literature included here. This renders the task of identifying a precise or consensual definition of the concept very difficult. Windle (1999) proposes a ‘most agreed upon definition’, which describes resilience as:

‘the “successful” adaptation to life tasks in the face of social disadvantage or highly adverse conditions’ (Windle, 1999:163.).

This basic conceptualisation of resilience as adaptation despite adversity is broadly evident across the literature included in this review, and offers a conceptual starting point.

Summary point 1

There is considerable variation in how resilience has been conceptualised and defined. A ‘most agreed upon definition’ of resilience is proposed in one review which describes resilience as ‘the “successful” adaptation to life tasks in the face of social disadvantage or highly adverse conditions’ (Windle, 1999:163.)

Background and rationale

The emergent area of resilience is suggested to have its roots in research on risk, stress and coping, and to have developed out of findings of ‘resilient subgroups’ (Glantz & Sloboda 1999). Interest and research in the area of resilience is reported to have grown exponentially in the last few decades (Smith & Carlson, 1997). Two key reasons for this trend have been suggested in the literature: Firstly, the empirical observations of people overcoming adversity in their daily lives, suggesting ‘resilience’ to be a real phenomenon; and secondly the apparent potential of these research findings to be applied to interventions.

Several key longitudinal studies have been cited across the literature as providing the foundation blocks for the development of subsequent theories and research programs. These have included studies of girls who spent much of their childhood in institutions (Quinton and Rutter, 1988) cited in Wolff (1995), children of parents diagnosed as mentally ill (Rutter 1993) and children from disadvantaged backgrounds (Garmezy, 1991; Werner 1989 cited in Ryff et al.(1998) (Garmezy 1993; Lindstrom 2001; Luthar & Cicchetti 2000; Luthar et al. 2000; Ryff et al. 1998; Wolff 1995). These studies have in common the key finding that, against the odds, a significant minority of the

populations under study achieved a level of functioning better than would be expected of them given their particular adverse circumstances and the level of functioning generally associated with populations with similar backgrounds (e.g. harmonious marriages, absence of maladaptive behaviour, competence in adulthood). These early findings appear to have inspired further programs of research aiming to identify factors promoting resilience, and opportunities to enhance resistance to stress and adversity with interventions.

Summary point 2

The emergent area of resilience has its roots in research on risk, stress and coping, and has developed out of findings from 'resilient subgroups'. Research in this area is suggested to be popular because of its potential to identify factors promoting resilience and, in turn, opportunities to enhance resistance to stress and adversity through interventions (Garmezy 1993; Glantz & Sloboda, 1999; Lindstrom 2001; Luthar & Cicchetti 2000; Luthar et al. 2000; Ryff et al. 1998; Smith & Carlson; Wolff 1995)

Concepts

Resilience as a trait, process or outcome?

As previously noted, great variability in conceptualisations of resilience is frequently reported in the literature. For example, one review (DeFabbro & Harvey, 2004) observes that resilience has been defined in terms of success in educational achievement; positive behavioural adjustment; enhanced cognitive functioning and as the absence of psychopathology. Another review (Glantz & Sloboda, 1999) describes how resilience is used variously as a quality, a trait, a process or an outcome, and the authors suggest that there is no consensus on the referent of the term, standards for its application, or agreement on its role in explanations, models and theories.

This differential conceptualisation of resilience as trait, process or outcome was commented on by the majority of reviews included in this section, although most suggested a preference for viewing resilience as a dynamic process rather than a personality trait or fixed attribute of the individual. There was suggestion that resilience could be defined as an outcome characterized by particular patterns of functional behaviour, despite risk (Olsson et al 2003), although in a review of current models of resilience another author suggests that all models are consistent in identifying resilience as a dynamic process that involves a personal negotiation through life and that fluctuates across time, developmental stage, and context (Tusaie & Dyer 2004).

Offering a definition that fits in with this assessment (Luthar & Cicchetti 2000) similarly propose; 'Resilience is a dynamic process wherein individuals display positive adaptation despite experiences of significant adversity or trauma.'

Summary point 3

Resilience has been variously defined as a trait, process or outcome, but some consensus is emerging on viewing resilience as a process (Condly, 2006; Delfabbro & Harvey, 2004; Fergus & Zimmerman, 2005; Glantz & Sloboda, 1999; Kaplan, 1999, Luthar & Cicchetti, 2000; Olsson et al, 2003; Rutter, 1993; Tusaie & Dyer, 2004,

Ungar, 2003)

Adaptation and risk

These suggestions highlight two key constructs in the resilience literature: adaptation and risk. In one review (Meschke & Patterson, 2003) it is suggested that resilience is sometimes conceptualised by researchers in the absence of significant risk or adversity (Meschke & Patterson 2003). However, the general consensus across the literature reviewed seems to be that for resilience to be inferred, a risk factor needs to be present. For example, Luthar & Cicchetti (2000) describes resilience as a two dimensional construct that implies exposure to adversity and the manifestation of positive adjustment outcomes. Positive adaptation is suggested to be usually defined in terms of behaviourally manifested social competence, or as success at meeting stage-salient developmental tasks (Luthar & Cicchetti, 2000). In other words, despite living in adverse or difficult conditions people are seen to present themselves as socially competent or as having achieved tasks that would normally be expected at a particular age or stage in life.

Definitions of risk factors offered by the reviews considered here included life circumstances known to be statistically associated with adjustment difficulties (Luthar & Cicchetti 2000), multiple life stressors, a single traumatic event, or cumulative stress from multiple factors (Tusaie & Dyer 2004). Within this two-dimensional construct of resilience as risk and adaptation, three groups of resilient phenomena are reported to have been further distinguished by Masten (1994, 1990): those where 1) at risk individuals show better-than expected outcomes, 2) positive adaptation is maintained despite the occurrence of stressful experiences, and 3) there is a good recovery from trauma (Masten 1994, 1990 cited by Luthar et al. 2000). In another review, resilience was similarly summarised as: a process of overcoming the negative effects of risk exposure, coping successfully with traumatic experiences, and avoiding the negative trajectories associated with risks. (Fergus & Zimmerman 2005).

<h3><u>Summary point 4</u></h3>

<p>Positive adaptation and risk are two important constructs in conceptualisations of resilience. There is some consensus that for resilience to be inferred there must be positive adaptation despite the presence of significant risk (Fergus & Zimmerman, 2005; Luthar & Cicchetti, 2000; Luthar et al, 2000; Meschke & Patterson, 2003; Tusaie & Dyer, 2004)</p>

Protective factors

On resilience itself, a common conceptualisation seems to be of a process of continuous interaction between risk and protective processes across time and context. Protective processes or factors are another central construct in theory and research on resilience: For example, one review defines them as factors that modify the effects of risk in a positive direction (Luthar & Cicchetti 2000). The investigation of protective factors and mechanisms has been a key focus of resilience research, and three levels of protective influences have been widely identified across the literature: Those at individual level, family level and community level. At the individual level, commonly cited factors include positive temperament, self esteem, self efficacy, cognitive factors and competencies such as coping strategies and social skills. At the family level these

include family cohesion, warmth, emotionally responsive care-giving, parent-child relationships, and at the wider level frequently mentioned factors include peer networks, supportive communities and the school environment. Racial identity, racial socialisation and bicultural identity have also been suggested in one review as potential sources of protection for minority groups (Miller 1999).

Summary point 5

Protective factors interact with risk to modify the effects of risk in a positive direction. Protective factors have commonly been identified at the individual level, the family level and the community level (Condly, 2006; Fergus & Zimmerman, 2005; Garnezy, 1993; Luthar & Cicchetti, 2000; Miller, 1999; Olssen et al 2003; Rutter, 1993; Smith & Carlson 1997; Tusaie & Dyer, 2004; Wolff, 1995).

Models of risk and protection

Whilst there does seem to have been broad consensus in the identification and listing of protective factors, and the concept of protection has been commonly applied to describe factors which have some kind of positive moderating effect on outcomes, there are variations in the finer details. For example, whilst one review used the term 'resources' to describe all types of factors listed above (Olsson et al. 2003), another suggested that distinctions should usually be drawn between 'assets', as positive factors that reside within the individual (e.g. competence) and 'resources', as positive factors external to the individual (e.g. parental support) (Fergus & Zimmerman 2005).

There also seems to be some variation in the way protective factors are conceived in terms of their relationship with risk. For example, the authors of one review define protective factors as factors that contribute to positive outcomes regardless of the risk status (Tusaie & Dyer 2004). In other reviews, distinctions are drawn between protective factors that operate in additive ways and are unaffected by the level or type of risk, and protective factors which are interactive with risk and may only have an effect in the presence of significant risk (Luthar & Cicchetti 2000; Windle 1999). This distinction is suggested to be crucial by one author who proposes that only the interactive model is reflective of the resilience concept, and that this interactive resilience model could be viewed as a specific class of a wider model of adaptation (Windle 1999). These distinctions are also discussed in another review where the authors introduce the term 'compensatory' to describe processes where protective factors are observed to have an additive, direct, independent effect on an outcome, and the term 'protective' is suggested to describe processes where protective factors moderate the effects of a risk on a negative outcome (Fergus & Zimmerman 2005). The same authors describe the possibility of a curvilinear relationship between a risk factor and outcome, for example where stress may enhance competence provided that it is not excessive; a scenario which has been termed the 'challenge' model (Fergus & Zimmerman 2005).

Vulnerability factors

In addition to protective and risk factors, a related construct of 'vulnerability factors' is discussed in some of the literature. These factors have been defined as indices that exacerbate the negative effects of the risk condition (Luthar & Cicchetti 2000) or traits that increase vulnerability to stress; for example, male gender for youth in poverty or low intelligence (Blum 1998).

Summary point 6

Distinctions are sometimes drawn between protective processes that have an 'additive' effect on outcomes, meaning that a positive effect can occur independently of risk, and protective processes that interact with risk, only having positive effects in its presence. The relationship between a risk factor and outcome can also be curvilinear, meaning that stress can sometimes enhance competence provided that it is not excessive (Fergus & Zimmerman, 2005; Luthar & Cichetti, 2000; Olsson et al. 2003; Tusaie & Dyer 2004; Windle 1999).

Summary point 7

Vulnerability factors are conceptualised in the literature as traits or indices that increase vulnerability to stress or exacerbate the negative effects of the risk condition (Blum, 1998; Luthar & Cichetti, 2000)

Emerging areas and applications

Family resilience

An emerging area highlighted in some of the literature is resilience as a group-level construct. Although most of the concepts discussed so far have been drawn from a literature predominantly focused on individual resilience, there were several suggestions that resilience could also be described at family and community levels (Glantz & Sloboda 1999; Hawley & DeHaan 1996; Walsh 2002) . A growing body of literature on resilience as a family level construct is reported in the literature reviewed here, which reflects a move away from more traditional, clinical deficit-based perspectives on families. This area of research focuses on the adaptive qualities of families as they encounter stress, and is concerned in particular with processes promoting coping, endurance and survival (Hawley & DeHaan 1996; Walsh 2002). Research in this field is reportedly examining the family and relational processes in which risk and protective mechanisms develop, resulting in some level of adaptation of the family system (Patterson 2002).

Summary point 8

Family resilience is a growing area of research. In this literature, resilience is conceptualised as a group level construct and research is focused on family processes and mechanisms of risk and protection which result in adaptation of the family system (Glantz & Sloboda, 1999; Hawley & DeHaan, 1996; Walsh, 2002)

Educational resilience

Several reviews were identified that focused specifically on educational resilience. This area of research is concerned with children and youth, the institutions that serve them and the communities in which they live, and attempts to identify conditions that enhance learning and the life chances of children and youth faced with adversity and risks. Educational resilience is seen as the product of continuous interaction between a child's attributes and alterable features of the environment, and has been defined as

success in school despite adversities brought about by environmental conditions and early experiences. This area of research has a clear, practical focus, and educational resilience is suggested to be fostered through interventions that develop children's coping abilities, establish protective factors and buffer children against adversities (Wang et al. 1999).

Summary point 9

Educational resilience is another emerging area. The product of continuous interaction between a child's attributes and alterable features of the environment, it has been defined as success in school despite adversities brought about by environmental conditions and early experiences (Wang et al. 1999).

Conceptual issues and implications

Multidimensional and variable across time, circumstance and context.

The most commonly discussed issues relating to the concept of resilience related to its nature as multidimensional and variable across time, circumstance and context.

The domains of resilience have been described as developmentally appropriate; changing with different life stages and with new vulnerabilities and strengths likely to emerge with changing life circumstances (Luthar et al. 2000; Rutter 1993). Furthermore, the process of continuous interaction between risk and protective factors has been suggested to have cumulative and exponential effects (Olsson et al. 2003).

Variations in resilience outcomes were also widely commented on, with broad agreement that a person could appear well adjusted in one domain but poorly adjusted in another. For example, they could exhibit behavioural competence but also poor emotional wellbeing. Several authors suggest that this puts into question the issue of whether resilience should be used as a global concept. They suggest instead that the concept of resilience may only be meaningful in the context of particular problems and stressors. On this point, the general consensus seems to be that domain specificity is required in discussing resilient outcomes, through the use of terms such 'educational resilience' and 'emotional resilience' (Delfabbro & Harvey 2004; Glantz & Sloboda, 1999; Johnson 1999; Luthar et al 2000; Tusaie & Dyer 2004; Ungar 2003). One review makes the point that the outcome, and level of outcome selected to infer resilience, must be guided by the nature of the risk under study (Luthar et al 2000).

Similar issues were raised on the subject of protective processes. These were also suggested to be context dependent, in that qualities and circumstances that promote a positive outcome in one situation may have no effect or even negative effect in another. For example, two reviews suggest that high levels of parental control may be beneficial in high risk environments, but not in low risk environments (Fergus & Zimmerman 2005; Glantz & Sloboda 1999). One review raised issues around distinguishing between protective factors and resilient outcomes, highlighting the way in which some researchers might conceptualise IQ or self-esteem as indicators of resilient outcomes, whereas others might consider them to be protective factors (Delfabbro & Harvey 2004).

Summary point 10

There appears to be consensus that resilience should be seen as multidimensional and variable across time, circumstance and context. Domain specificity is therefore required and the outcomes selected to infer resilience should be developmentally appropriate and appropriate to the type of risk condition (Delfabbro & Harvey, 2004; Glantz & Sloboda 1999; Johnson. 1999; Luthar et al 2000; Tusaie & Dyer 2004; Ungar 2003)

Ethical Issues

Some ethical issues were also discussed. The first of these concerned with the potential for ‘victim blaming’ within the concept of resilience. For example, the authors of one review observed that the concept can lend itself to the question that if some individuals can overcome adversity, then why not others? (Fergus & Zimmerman 2005). There may be greater potential for this where resilience is conceptualised as a trait, leading to the majority of authors that addressed this issue calling for resilience to be used as a descriptive (rather than explanatory) concept which is concerned with the process and mechanisms underlying resilient outcomes (see summary point 3). On this note, Luthar & Cichetti (2000) recommends that researchers avoid the use of terms ‘resiliency’ and ‘resilient’ as adjectives, applying them instead to trajectories/ profiles of adaptation. They also suggest that individual protective factors such as locus of control could be usefully conceptualised as attributes influenced by life circumstances (Luthar & Cicchetti 2000).

Following these concerns, a number of authors expressed anxiety about the potential political uses of resilience to justify neglect of the macro-environment and limited efforts to address poverty (Doll & Lyon 1998; Fergus & Zimmerman 2005; Lindstrom 2001; Wolff 1995). To help prevent this, one review (Doll & Lyon, 1998) proposes that researchers should emphasise the role of important social institutions in supporting and assisting communities that do not have the resources, or cannot engender the will, to limit the risk conditions in which children are raised.

Summary point 11

Concerns have been expressed that the concept of resilience may lend itself to ‘victim blaming’ explanations and political usage of the concept to justify limited efforts to tackle poverty. The importance of seeing resilience as a process rather than a trait was stressed and a greater focus on the role of social institutions is recommended (Doll & Lyon 1998; Fergus & Zimmerman 2005; Lindstrom 2001; Luthar & Cichetti 2000; Wolff 1995)).

Q1B: Coping**Definitions**

The authors of one review propose that the most widely adopted definition of coping is that of Lazarus and Folkman (1984, cited in Sandler et al, 1997), which defines coping as continually changing behavioural and cognitive efforts to manage external and/ or internal demands that are appraised as exceeding the individual’s resources.

Although a number of the reviews included in this section highlight several different perspectives on coping, for example psychoanalytic and motivational models, this definition or approach was the most commonly discussed across the literature included in this review.

Summary point 12

A most widely adopted definition of coping is suggested to be that of Lazarus and Folkman (1984), which defines it as continually changing behavioural and cognitive efforts to manage external and/ or internal demands that are appraised as exceeding the individual's resources. (Fields & Prinz 1997; Sandler et al. 1997)

Background and rationale

Coping research is reported to have evolved from the stress research programs of the 1960s, reflecting a move away from deficit models of adaptation to a focus on people's capacity to deal with life's circumstances (Frydenberg 2002). Early research in this area highlighted the complex relationships between stress and illness, prompting research into the mediators and moderators of these relationships (Haggerty et al. 1996). This focus on the processes and mechanisms by which people adapt to adverse life experiences is suggested to be important for both understanding health needs and problems, and developing strategies or interventions to prevent problems or improve health and well being that target how people deal with stress (Moos & Holahan 2003; Rosella & Albrecht 1993; Sandler et al. 1997).

Summary point 13

Coping research is reported to have evolved from stress research, focusing on the processes and mechanisms by which people adapt to stress. This is suggested to be important for understanding health needs and problems, and developing strategies or interventions to prevent problems or improve health and well being (Frydenberg, 2002; Haggerty et al. 1996; Moos & Holahan, 2003; Rosella & Albrecht, 1993; Sandler et al. 1997).

Concepts

Three theoretical perspectives on coping were apparent in the literature; transactional, psychoanalytic and motivational (Sandler et al. 1997).

The transactional approach

The definition offered earlier of coping - as continually changing behavioural and cognitive efforts to manage external and/ or internal demands that are appraised as exceeding the individual's resources - stems directly from the transactional approach. This was by far the most commonly discussed and applied approach in the reviews included in this section, with its dominant position in the field of coping research commented on by the authors of three reviews (Fields & Prinz 1997; Frydenberg 2002; Sandler et al. 1997).

Several defining features of this approach were made apparent in the literature which, when drawn together, suggest the following conceptualisation: That (a) coping is a continuous and dynamic process of person-environment interaction (Aspinwall 2004) (b) it fluctuates over time in response to changing demands and appraisal of the situation (Moos & Holahan 2003) and (c) it is situation- as opposed to person-specific

(i.e. it is not a stable trait of the individual, instead use of coping strategies changes depending on the stressor) (Luthar & Cicchetti 2000; Sandler et al. 1997). In keeping with this conceptualisation, the authors of a further review (Rosella & Albrecht, 1993) suggest that an individual's ability to cope with stress is influenced by the nature of the stressors, prior experiences with similar stresses, and the availability of adequate coping resources. Put another way, relations among appraisals of the event and the individuals resources for managing it, coping efforts, and outcomes are recursive (Lazarus (1990) cited in Aspinwall (2004)). Additionally, the processes of person-environment transaction has been suggested to result in changes in the individual's beliefs, approaches to future stressful situations, and action to change the environment to increase or decrease exposure to further stressors. (Aspinwall 2004)

Summary point 14

The transactional approach appears to be most commonly applied in relation to the concept of coping. This model suggests that (a) coping is a continuous and dynamic process of person-environment interaction, (b) it fluctuates over time in response to changing demands and appraisal of the situation and (c) it is situation as opposed to person specific (Aspinwall, 2004; Fields & Prinz 1997; Frydenberg 2002; Moos & Holahan 2003; Rosella & Albrecht 1993; Sandler et al 1997)

The transactional approach: appraisal process

A number of other features within this conceptualisation of coping are described in the literature which, when taken together, help to explain the dynamics of the process itself. For example, the first stage of coping is said to occur where individuals encounter adverse events as they interact with their environment (stressors) (Sandler et al. 1997). With this encounter begins the appraisal process. The first step in the appraisal process, known as primary appraisal, involves the assessment of the event as irrelevant, benign-positive or stressful, with stressful appraisals then mobilising coping behaviours in individuals. Secondary appraisal is the next evaluative stage of appraisal process, where coping options are reviewed, the effectiveness of the coping option is weighed and the ability of the individual to apply strategies appropriately is examined. (Outlaw 1993; Pincus & Friedman 2004; Smith & Carlson 1997). The third step is the use of coping strategies to manage the effect of the stressors, or attempts to change the situation (the functions of coping efforts) (Sandler et al. 1997). And a final step is suggested to be the evaluation of the coping effort in terms of its effectiveness in eliminating or reducing the stressor or managing one's response to the stressful event (Smith & Carlson 1997).

Summary point 15

Key stages in the coping process are: primary appraisal of the adverse event; secondary appraisal of coping options; and the use of coping strategies to manage the effect of the stressors or attempt to change the situation, perhaps with a final step of evaluation (Outlaw 1993; Pincus & Friedman 2004; Sandler et al 1997; Smith & Carlson 1997)

The transactional approach: stress

Stress, coping resources and coping strategies – as concepts integral to this transactional approach to coping – are also discussed in the literature. Lazarus' (1991) definition of stress was described in one review (Lazarus (1991) cited in Frydenberg,

2002). This definition conceptualises stress as a mismatch between the perceived demands of a situation, and the individual's assessment of his or her resources to deal with these demands (Frydenberg 2002). Another review (Fields & Prinz 1997) suggests that distinctions are usually drawn in the literature between the 2 main categories of stressors; life events and daily hassles, and that distinctions are also drawn between controllable and uncontrollable stressors, on the basis that different coping strategies are likely to be required. Stressor types are further broken down by Smith & Carlson (1997), who distinguish between acute stressors (major life events e.g. loss of a parent, and daily hassles e.g. arguing with parents), ordinary stressors (events experienced by most children and adolescents e.g. starting a new school), unusual stressors (e.g. experiencing natural disaster) as well as chronic stressors (e.g. deprivation, abuse).

Summary point 16

Stress is conceptualised as a mismatch between the perceived demands of a situation and the individuals assessment of his or her resources to deal with these demands. Distinctions have been drawn between life events and daily hassles, controllable and uncontrollable stressors, acute stressors, ordinary stressors, unusual stressors and chronic stressors (Fields & Prinz, 1997; Frydenberg, 2002; Smith & Carlson, 1997).

The transactional approach: coping resources

Coping resources are another key component in the transactional stress-coping framework. Two reviews suggest that they exert considerable influence on appraisals and coping responses, and act as mediating variables in the stress-coping relationship (Rosella & Albrecht 1993; Smith & Carlson 1997). In the literature included in this review coping resources were generally grouped into categories of internal and external resources.

Commonly mentioned internal factors included beliefs and values, in particular beliefs about control, efficacy and self-worth, and knowledge, intelligence, problem solving and social skills, which are suggested to facilitate access to social support (Fields & Prinz 1997; Sandler et al. 1997; Smith & Carlson 1997). These resources were discussed in more detail by the authors of one paper (Rosella & Albrecht, 1993), who suggest that personal effectiveness - influenced by self-esteem and locus of control - is the most crucial of all internal mediators. Here it was proposed that beliefs about controllability of stressful events could influence the degree to which an individual attempts to master or change the stressful circumstances, as opposed to trying to tolerate or adjust to adverse circumstance.

The most commonly identified external mediators (or environmental resources) in the papers were all related to social support (Lakey & Cohen 2000; Moos & Holahan 2003; Sandler et al. 1997; Smith & Carlson 1997). Reasons for the apparent buffering role of social support included suggestions that it encourages more adaptive coping responses, promotes self-esteem, self confidence, perceptions of control and also provides information and guidance (Moos & Holahan 2003; Sandler et al. 1997). One review draws distinctions between perceptions of available support, as something which leads to appraising potentially threatening situations as less stressful, and supportive actions that directly enhance coping performance, for example through providing advice and reassurance (Lakey & Cohen 2000).

Summary point 17

Coping resources influence appraisals and coping responses. They are generally grouped into internal resources (e.g. problem solving skills) and external resources (e.g. social support) (Fields & Prinz 1997; Lakey & Cohen 2000; Moos & Holahan 2003; Rosella & Albrecht, 1993; Sandler et al. 1997; Smith & Carlson 1997)

The transactional approach: coping responses and strategies

A further conceptual component of the transactional approach relates to coping efforts, and the coping strategies used to respond to the stressful situation. From the transactional stress-coping perspective, coping efforts or strategies have been defined as cognitive and behavioural actions in a specific situation which are intended to manage affective arousal (ie emotional states) or improve a problematic situation (Sandler et al. 1997). Several slightly different models are highlighted in the literature which have been used to describe coping responses, although they all share common features. Probably the most well known and widely used of these models is the problem-focused / emotion-focused coping dichotomy, which was summarised in some detail in 3 reviews. Based on Lazarus' (1974) cognitive appraisal model (cited in Fields & Prinz 1997; Pincus & Friedman 2004; Smith & Carlson 1997)), this dichotomy distinguishes between problem-focused coping efforts that are aimed at modifying the stressor (e.g. via direct problem solving) and emotion-focused coping which is aimed at regulating the emotional states that may accompany the stressor, or adapting to the stressor without altering it (Fields & Prinz 1997; Pincus & Friedman 2004; Smith & Carlson 1997).

One review discusses several other models similar to the problem-focused/ emotion-focused dichotomy (Fields & Prinz 1997), including Moos & Billings (1983) three part typology which distinguishes among (a) practically-oriented efforts, aimed at resolving or circumventing problems (b) emotionally-oriented efforts, which dampen, vent, or counteract negative feeling states, and (c) cognitively oriented efforts, which alter or minimize appraisal of threat or misfortune. Another model identified by the same authors is the primary/ secondary control model (Rothbaum et al. 1982, cited by Fields & Prinz 1997). Like problem-focused coping, primary control is conceptualised as efforts aimed at influencing objective conditions, whilst secondary control (similar to emotion-focused) is conceptualised as efforts aimed at maximising 'one's goodness of fit' with conditions or events as they are. The review authors also explain how an option of relinquished control (Band & Weiz, 1990) has been proposed to describe the absence of goal activity or coping, that is doing nothing or giving up (Fields & Prinz, 1997). A further review explains that as well as distinguishing between methods of coping (i.e. cognitive or behavioural), approaches have also been classified by the focus of orientation of response, for example approach coping or avoidance coping (Moos & Holahan 2003).

Fields & Prinz (1997) explain how several attempts have been made to synthesise these models, for example by grouping together those strategies that aim to affect the stressor more directly (i.e. problem focused, primary control coping, approach coping, active coping) and those efforts directed at managing the negative emotions associated with a stressful event (e.g. emotion focused coping, secondary control coping, avoidance, passive coping). However, the authors suggest that such an

approach risks blurring some distinctions; for example emotion-focused coping could include approach and avoidance strategies. The authors consequently propose that it is better to see problem/ approach and emotion/ avoidance as four overlapping groups representing two different dimensions of coping (Fields & Prinz 1997). Seemingly reflecting such a conceptualisation, the authors of another review (Moos & Holahan 2003) have combined the two approaches to illustrate the four basic types of coping responses: cognitive approach (e.g. logical analysis/ positive reappraisal-restructuring a situation to find something favourable), behavioural approach (seeking guidance and support-taking action to address situation directly), cognitive avoidance (denying or minimising the seriousness of situation/ accepting situation as it is) and behavioural avoidance (seeking alternative rewards, creating alternate sources of satisfaction, risk taking).

In terms of the relative effectiveness of the different types of strategies, 2 reviews explain how approach focused coping has been considered generally to result in better adaptation than avoidance coping (Moos & Holahan 2003; Sandler et al. 1997), on the basis that approach skills can moderate the adverse influence of stressors, whereas avoidance (e.g. withdrawal) is generally associated with psychological distress and behaviour that is likely to be detrimental in its effects (Moos & Holahan 2003). However, the authors of two reviews explicitly warn of oversimplifications, in particular with regard to past tendencies to dismiss emotion-focused coping as maladaptive and avoidant when, for example, developing a positive attitude about a situation can represent a form of active coping and may in fact be the most appropriate response for a particular situation (Moos & Holahan 2003; Windle 1999). Another review explains that emotion-focused coping strategies are typically more adaptive when an appraisal leads to the conclusion that nothing can be done to modify difficult conclusions, whilst problem-focused coping will be more adaptive when the situation has been appraised as amenable to change (Pincus & Friedman 2004). Moos & Holahan (2003) similarly propose that individuals adapt best when coping efforts match situational demands and therefore the optimal coping response will vary depending on personal and social resources and requirements of a particular situation.

Summary point 18

Coping efforts or strategies have been defined as cognitive and behavioural actions in a specific situation, which are intended to manage emotions or improve a problematic situation. Several slightly different descriptive models are highlighted, of which the most well known and widely discussed was the problem-focused/ emotion-focused dichotomy. Problem-focused coping efforts are aimed at modifying the stressor (e.g. via direct problem solving) and emotion-focused coping is aimed at regulating the emotional states that may accompany the stressor, or adapting to the stressor without altering it.

Emotion-focused coping strategies are suggested to be more adaptive when an appraisal leads to the conclusion that nothing can be done to modify difficult conclusions, whilst problem-focused coping will be more adaptive when the situation has been appraised as amenable to change (Fields & Prinz 1997; Moos & Holahan 2003; Pincus & Friedman 2004; Sandler et al. 1997; Smith & Carlson 1997; Windle 1999).

Psychoanalytic approaches

A second approach mentioned in 3 reviews was the dispositional or psychoanalytic approach associated with Hann (1977) (cited in Frydenberg 2002; Moos & Holahan 2003; Sandler et al. 1997). Instead of seeing coping as a process of person-environment interaction, where individuals' appraisals and coping responses are shaped by situational factors, this approach suggests stable, person based factors that underlie habitual coping efforts (e.g. personality, attitudinal and cognitive characteristics). 'Ego-processes' - conceptualised as cognitive mechanisms which manage life situations and contribute to adaptive functioning – are a central feature of this type of approach (Frydenberg 2002; Moos & Holahan 2003; Sandler et al. 1997). Rather than describing coping responses as coping strategies, this model talks of coping styles, which are conceptualised as habitual ways of approaching a problem, as opposed to situational strategies (Sandler et al. 1997).

Although transactional approaches are reported to have dominated the coping field, there appears to have been a re-emergence of interest in the role of personality traits in coping and adaptation (Frydenberg 2002). It is also suggested that contemporary theorists generally recognise a degree of compatibility and complementariness between the approaches, insofar as dispositional approaches tap into general, preferred coping styles that transcend particular situational influences, whilst contextual approaches describe responses to specific stressful encounters and changes in coping efforts during a stressful encounter (Moos & Holahan 2003).

Summary point 19

The dispositional or psychoanalytic approach was given some mention in the literature. Instead of seeing coping as a process of person-environment interaction, this model suggests stable, person based factors to underlie habitual coping efforts (e.g. personality, attitudinal and cognitive characteristics). These two approaches are not generally seen as incompatible insofar as dispositional approaches tap into general, preferred coping styles that transcend particular situational influences, whilst contextual approaches describe responses to specific stressful encounters and changes in coping efforts during a stressful encounter (Frydenberg 2002; Moos & Holahan 2003; Sandler et al. 1997)

Motivational approaches

A third approach described in only 2 papers in which it is acknowledged to be outside of the mainstream coping literature is the motivational perspective on coping (Sandler et al. 1997; Skinner & Edge 2002). This approach, associated with Skinner and Wellborn (1994), cited by Sandler et al. (1997), considers that stress results from an assault on basic psychological needs of relatedness, autonomy and competence (Sandler et al. 1997). Coping is therefore positioned away from the process of fending off the harmful consequences of stress, and towards peoples' efforts to fulfil these needs (Sandler et al. 1997; Skinner & Edge 2002). This conceptualization links coping closely with developmental theory on regulation of emotion, behaviour and motivation (Sandler et al. 1997), and reportedly builds on work from many related areas, including attachment, helplessness, self-efficacy, self determination, emotion

and self-regulation, help seeking, social support and parenting. (Skinner & Edge 2002).

Summary point 20

The motivational approach was described in only a small section of the literature. From this perspective stress results from an assault on basic psychological needs of relatedness, autonomy and competence. Coping is therefore seen less about fending off the harmful consequences of stress than about peoples' efforts to fulfil these needs (Sandler et al. 1997; Skinner & Edge 2002)).

Emergent areas and applications

Two more specific applications of the coping literature were highlighted in the literature and discussed in the material retrieved in the searches; the emergent area of children's coping as a distinct field of research, and the application of the stress-coping framework to the specific racialised experiences of minority groups.

Children's Coping

Research and theory development in the field of children's coping was described at being at a relatively early stage, having really only come into its own in the last decade (Skinner & Edge 2002; Smith & Carlson 1997). Children's coping was explicitly discussed in three reviews, all of which seem to agree that separate theorisations and approaches – rather than the adult-oriented approaches that have often been applied - may be needed for children, since the stressors to which children are exposed are often different and less controllable than adult stressors (Fields & Prinz 1997; Skinner & Edge 2002; Smith & Carlson 1997). In one review, research on children's coping and the related area of parenting and coping were discussed and framed within the motivational perspective described earlier (Skinner & Edge 2002).

Summary point 21

Children's coping is beginning to be seen as a separate area in need of discreet frameworks. The distinction between controllable and uncontrollable stressors is seen as especially problematic for conceptualisations of children's coping (Fields & Prinz 1997; Skinner & Edge, 2002; Smith & Carlson 1997)

Stress, racism and coping

Discussion in two papers focused on the potential application of Lazarus and Folkman's (1984) framework as a theoretical perspective to guide the examination of African-American responses to stress, in particular the influence of racism on the appraisal, stress, and coping of this group. These authors suggest that in spite of the specific racialised experiences of some minority and ethnic groups, coping in this area has been under-theorised and under-researched. They call for increased attention to the ways racism may influence the cognitive appraisals of African Americans. (Outlaw 1993; Rosella & Albrecht 1993).

Summary point 22

The stress-coping framework has been applied to help develop understandings of the influence of racism on the appraisals, stress and coping of African Americans, however more research is needed in this area (Outlaw 1993; Rosella & Albrecht 1993)).

Conceptual issues and implications

Content

The only general conceptual issue raised regarding the transactional stress-coping framework was discussed in 2 reviews. It concerns the minimal attention that the approach pays to stressor characteristics. By focusing on coping processes, this approach appears to leave fundamental questions – around what is coped with, what needs to be controlled, what is stressful and what is appraised - unanswered. (Aspinwall 2004; Skinner & Edge 2002). It is worth noting that these authors were drawing on literature outside of the mainstream coping literature; motivational and self regulatory models (Aspinwall 2004; Skinner & Edge 2002), which they argue favours a much stronger position on the content of stressors and coping than traditional transactional perspectives(Aspinwall 2004). However, this limitation is also reported to have been acknowledged by mainstream theorists such as Folkman, who have similarly called for greater clarity on the character of stressors (Aspinwall 2004).

Summary point 23

In its focus on process, the transactional framework has been criticised for a lack of attention to the content and character of particular stressors (Aspinwall, 2004; Skinner and Edge, 2002)

Control and children's coping

As previously noted, questions were raised in one review regarding the applicability of adult coping models to children, particularly with regard to the categorisation of coping responses (Glantz & Sloboda 1999). The authors suggest that the problem/emotion focused distinction assumes an understanding of stressor controllability and glosses over distinctions regarding adaptive functioning. Likewise, it is suggested that whilst the approach/ avoidance conceptualisation predicts adjustment a little better, it apparently also suffers from the same problem of combining adaptive and maladaptive strategies within the same category. As with earlier suggestions on coping strategies, the authors propose a more appropriate approach to be the combination of these approaches in a two-by-two framework (i.e. problem-focused/ emotion-focused by approach/ avoidance), although they also comment that this does not adequately clarify linkages of different response to adjustment. Related to this, it is also suggested that there has been a general reluctance to incorporate adjustment into the coping framework, with a proposed next step being to integrate the concept of adaptive functioning into models of child coping (Fields & Prinz 1997) a position that would appear to share common ground with motivational perspectives on child coping.

Summary point 24

Issues have been raised regarding applicability of adult coping models to children in relation to the categorisation of coping responses, and a lack of attention to the links between coping responses and adjustment (Fields & Prinz, 1997; Glantz & Sloboda, 1999).

Psychoanalytic model

Although not widely discussed, a difficulty with the psycho-analytic model was observed in one review. These authors suggest that in its emphasis on the cognitive processes that contribute to more adaptive functioning, this model neglects many thoughts and behaviours that individuals utilize to 'cope' with the problems but which are not necessarily successful i.e. negative coping (Sandler et al. 1997).

Q1C: Salutogenesis

Definitions

The term 'salutogenesis', now established as key term in public health and health promotion, was originally coined by American-Israeli medical sociologist Aaron Antonovsky (1998) and is generally positioned as an alternative way of thinking about health, rather than a concept in itself. In essence, this way of thinking poses the question of why it is that some people, against all the odds, remain healthy in situations of stress or adversity? (Hansson & Cederblad 2004)

Background

The salutogenic (literally, 'health creating') approach was developed as an alternative to pathogenic approaches and grew out of Antonovsky's concerns that paradigms that focus on the underlying processes of illness and diseases were not appropriate frameworks within which to research health. He observed that even advocates of social models of health, alternative health and health prevention, who were critical of the focus on disease, still appeared tied into a pathogenic view of health. This view tends to focus on what 'keeps the bugs away' rather than how it is that people usually manage to keep healthy in spite of external threats or stressors, or how some people remain relatively healthy despite facing acute stress (Antonovsky, 1979, cited in Antonvosky 1998). Antonovsky's initial interest in salutogenic mechanisms grew out of his research into Israeli women who stayed healthy despite experiences from the concentration camps of the Second World War (Eriksson & Lindstrom 2005). By focusing on salutogenesis, in contrast to pathogenesis, Antonovsky hoped that researchers might start to identify pathways and mechanisms leading in the direction of health (Antonovsky, 1979, cited in Antonvosky 1998). Salutogenic research implies a focus on health maintenance processes rather than disease processes. It asks why people remain healthy rather than why people become ill.

Several rationales are given in the literature as to why salutogenic frameworks have been used by researchers and practitioners. A first reason given was the limited scope of pathogenic research for explaining and providing responses to variations in morbidity and mortality in modern society, and other health problems which fall outside the traditional boundaries of health care provision (Lamprecht & Sack 2003). In addition, the concept of salutogenesis is suggested to have gained currency in more recent years as contributing to alternative explanations for inequalities in health (Charlton & White 1995) as a means of facilitating joint working across academic disciplines and professional practice (Lindstrom & Eriksson 2005), and as a way of developing theoretically informed interventions (Hansson & Cederblad 2004). The approach has been used to inform the development of therapeutic practice, the design of environments and provision in settings that promote positive health (Wallerstein

1992) and the development of health promotion models and approaches (Lindstrom & Eriksson 2005). The approach seems to have particular currency in Scandinavian countries, where since 2003 the Nordic School of Public Health has been running a salutogenic project (Eriksson & Lindstrom 2005, 3-,B).

Summary point 25

The salutogenic approach was developed as an alternative to pathogenic approaches and essentially grew out of Antonovsky's concerns that a different paradigm was required in order to research health, which was quite different from that which looks at the underlying processes of illness and disease. By focusing on salutogenesis, in contrast to pathogenesis, Antonovsky hoped that researchers might start to identify pathways and mechanisms leading in the direction of health. Salutogenic research therefore implies a focus on health maintenance processes rather than disease processes (Eriksson & Lindstrom, 2005, 3- B; Antonovsky, 1998; Charlton & White, 1995; Hansson & Cederblad, 2004; Lamprecht & Sack, 2003; Lindstrom & Eriksson, 2005; Wallerstein, 1992).

Concepts

Unlike concepts such as 'coping' and 'resilience' which are words in common usage and utilised in academic research in different, sometimes contradictory, ways by different people from a variety of disciplines, 'salutogenesis' and its operationalised form, 'sense of coherence', are associated with a particular concept developed in medical sociology by Aaron Antonovsky. Consequently, although there are some differences in interpretation and opinion as to its significance in health research, there is a relative consensus about what it means, what it attempts to explain and how it can potentially be used.

The word salutogenesis is itself derived from a combination of 'salus', meaning health, and 'genesis', meaning 'giving birth' so the term means that which gives birth to health. Although Antonovsky proposed no specific model of health he saw health-ease and dis-ease at two ends of a continuum. Most research, he argued, looks at processes that move, or prevent people moving, towards the dis-ease pole. Salutogenic research, however, looks at processes that move people towards, or keep people at, the health-ease pole. Salutogenic research poses an alternative frame for understanding the relationship between the person in relation to the world. He argued that 'it directs us to the mystery of health in the face of a microbiological and psychosocial entropic reality, a world in which risk factors, stressors or "bugs" are endemic and highly sophisticated.' (Antonovsky 1998)

Summary points 26

'Salutogenesis' and its operationalised form, 'sense of coherence', are associated with a particular concept developed in medical sociology by Aaron Antonovsky. Antonovsky saw health-ease and dis-ease at two ends of a continuum. Salutogenic research looks at processes that move people towards, or keep people at, the health-ease pole. (Antonovsky, 1998)

Sense of coherence

So why do people stay healthy in the face of the risks and stressors that they face in everyday life and why do some people stay healthy in the face of extreme adversity?

The answer to the salutogenic question was, for Antonovsky, in some way related to the way in which people bring ‘order out of chaos’ (Antonovsky 1998) and from that premise he developed a model which starts with the way in which people make the world coherent to them. The idea of ‘sense of coherence’ or SOC, has provided a theoretical framework for salutogenic research ever since. At first glance, this term is misleading as it appears to emphasise the cognitive or perceptive element of the construct. However, it is also argued that SOC refers to collective coping and the ability to mobilise resources to manage stress, and is therefore not an individual concept because of the emphasis on resources (Taylor 2004). In fact SOC has three key elements: the ability for people to understand what happens around them, the extent to which they are able to manage the situation on their own or through others in their social network, and the ability to find meaning in the situation. These components are described as: comprehensibility, which is the cognitive element and relates to the way in which the person sees the world, manageability, the instrumental element, and meaningfulness which refers to the way in which the person is motivated to think and act in these ways (Lindstrom & Eriksson 2005). In other words a ‘sense of coherence’ relates to the way in which human agents make sense of the world, use the required resources to respond to it and feel that these responses are meaningful and make sense emotionally (Antonovsky 1998).

Comprehensibility, manageability and meaningfulness

It is worth looking at these elements in more detail as all three are essential to the way in which research in this area has developed. Essentially, people with a high sense of coherence experience their lives as meaningful and manageable (Christiansen 1999). In the first place, the world is comprehensible and appears structured, predictable and explicable (Hansson & Cederblad 2004). It is the belief that one’s view of the world, if it is applied to a particular problem, makes sense (Antonovsky 1998). Secondly, the world as it appears, and the demands that it imposes, is manageable and the resources to deal with particular problems are available. In this case it is not simply that the resources are there, but the person believes the appropriate resources are available and that they can be mobilised to deal successfully with any challenges that are encountered (Hansson & Cederblad 2004). Finally, these challenges are meaningful in that they are thought to be worth it, emotionally, and are worthy of investment and engagement.

General Resistance Resources

One aspect that makes SOC different from some other similar concepts is its understanding of the nature and use of ‘resources’. General Resistance Resources (GRRs) are suggested to provide a person with sets of meaningful and coherent life experiences thanks to the resources at the person’s disposal (Lindstrom & Eriksson, 2005). The notion of manageability is suggested to link to Kobasas et al’s concept of hardiness and Rotter’s ‘internal locus of control’⁵. However, the resources referred to here are conceptualised as being under the person’s own control and can therefore be seen as highly individualistic (Lamprecht & Sack 2003). Antonovsky, on the other hand, saw SOC as essentially structural, and although what he called general resistant resources may be internal resources they may also lie in the social environment as

⁵ Kobasa SC, Maddi S, Kan S. Hardiness and health: a prospective study. *J Pers Soc Psychol* 1982; 42: 168-177

Rotter JB. Generalized experiences for internal versus external control of reinforcement. *Psychological Monographs* 1996; 80.

well as being material or non-material in nature. Resources identified by Antonovsky include; material, knowledge/ intelligence, ego identity, coping strategy (rational, flexible, far sighted), social support, ties, commitment (continuance, cohesion, control), cultural stability, magic, religion/philosophy/art (a stable set of answers) and a preventative health orientation. (Lamprecht & Sack 2003; Lindstrom & Eriksson 2005). In another review Antonovsky's resources were described as having characteristics under eight domains, which the author, using a salutogenic matrix to assess research on child protection, collapsed into four: biological (physiological and biochemical characteristics), psychological (cognitive and emotional characteristics), interpersonal (valuative-attitudinal and interpersonal-relational characteristics) and sociocultural (artefactual-material characteristics and macro-sociocultural characteristics) (Taylor 2004).

Summary point 27

A Sense of Coherence (SOC) relates to the way in which human agents make sense of the world, use the required resources to respond to it and feel that these responses are meaningful and make sense emotionally. It has 3 elements; comprehensibility, which is the cognitive element and relates to the way in which the person sees the world, manageability, the instrumental element, and meaningfulness which refers to the way in which the person is motivated to think and act in these ways.

General Resistance Resources are a key concept in understanding SOC; these resources may be internal or they may lie in the social environment, and could be material or non material in nature (Antonovsky, 1998; Christiansen, 1999; Hansson & Cederblad 2004; Lamprecht & Sack 2003; Lindstrom & Eriksson 2005; Taylor, 2004).

A universal concept

Antonovsky argued that the concept of salutogenesis was universal, applicable cross-culturally and not dependent on any particular world view. As he argued 'seeing the world as comprehensible, manageable, and meaningful would facilitate the selection of culturally appropriate and situationally efficacious resources and behaviours.' (Antonovsky, 1998:174). Wallerstein similarly pointed out that SOC eliminates the cultural bias of the concept of 'control', which has typically promoted individual decision making at the expense of the group (Wallerstein 1992).

Emergent areas and applications

Although very little reference was made to salutogenesis in the articles identified in this review, one area where it was referenced was in attempts to explain the positive effects that religion appears to have on health. In one review article a framework was put forward for a salutary religious effect on the mental health of older adults, which resonates strongly with Antonovsky's theorisations. For example, it was suggested that religious involvement may influence mental health by; offering cognitive frameworks such as sense of coherence, order or meaning, that serve to buffer the impact of stress and facilitate coping, providing concrete social resources and by enhancing internal psychological resources such as feelings of self esteem and worthiness. All of these potential pathways could therefore be seen to contribute to perceptions of comprehensibility, meaningfulness and manageability (Levin & Chatters 1998)

Summary point 28

One theoretical application of Salutogenic theory is in attempts to explain the positive effects that religion appears to have on health (Levin & Chatters, 1998)

Conceptual issues and implications

The main conceptual issue raised with regard to salutogenesis and sense of coherence, was its association with individualistic approaches and explanations. Although Antonovsky clearly stresses the structural dimensions to resistance resources and the sense of coherence (Antonovsky 1998), it was suggested that the concept tends to be associated with well educated individuals in privileged societal positions (Taylor 2004). In its emphasis on constructs such as control it was also suggested that the SOC construct can lend itself to explanations and interventions which are neglectful of the fact that people in poverty often have very limited control over their circumstances. In response to this false usage and application of the concept, this author, in line with Antonovsky's original conceptualisation, highlights the need to locate control in its broader social context. (Wallerstein 1992). Possibly in response to these charges of individualism, Antonovsky, in his own paper, similarly reiterates his interest in the structural resources of SOC, suggesting it to be dependent on history and generational experiences of social, cultural and economic change, and he stresses the importance of making links with class, occupation and race when conceptualising and applying sense of coherence. It should also be pointed out that although SOC is usually seen as an individual attribute, Antonovsky believes it to be a collective attribute too (Antonovsky, 1998)

Summary point 29

Although Antonovsky clearly stresses the structural dimensions to resistance resources and the SOC it has been suggested that the SOC construct can lend itself to explanations and interventions which are neglectful of the fact that people in poverty often have very limited control over their circumstances (Antonovsky, 1998; Taylor, 2004; Wallerstein, 1992).

Q2: How have researchers approached the study of resilience, coping and salutogenesis?

This section considers the approaches of researchers to the three areas. 22 papers on resilience (21 TLRs, 1 systematic review), 8 papers on coping (6 TLRs, 2 systematic reviews) and 4 papers on salutogenesis (3 TLRs, 1 Systematic Review) were used to answer this question. The areas are considered separately and are organised into the following subheadings; Areas and focus of research, methods, operationalisation, and issues and implications with research. It should again be noted that this last subsection is reporting solely on the issues and implications identified in the literature, rather than our own interpretations of the literature.

Q2A: Resilience**Areas and focus of research**

Research in the area of resilience is suggested to have been extremely broad ranging; exploring resilience in the contexts of poverty, abusive families, alcoholic families,

homelessness, chronic illness/ disability, teen mother, juvenile delinquency (Blum 1998), divorce, war, earthquakes, school transitions and various other potentially negative life experiences (Masten et al. 2006). It has also been noted that within research, distinctions are usually drawn between resilience as recovery from trauma and resilience as the maintenance of development despite the presence of threat or risk (Ryff et al. 1998) and whilst some investigators have reportedly focused on one kind of event or experience, others have considered cumulative adversity (Masten et al. 2006). In terms of groups of interest it is reported that most research has been carried out by developmental researchers dealing with early childhood and adolescence, although a recent focus on early and middle adulthood has also been observed (Ryff et al. 1998). A neglect of minority groups has also been reported (Miller 1999).

A shift in the focus of research has also been observed over the years with research agendas moving from the identification of outcome profiles of those experiencing negative life circumstances and events, to identifying protective factors associated with positive outcomes and most recently seeking to understand underlying protective processes (Luthar et al. 2000; Ryff et al. 1998).

Summary point 30

Research in the area of resilience has been broad ranging, exploring resilience in the contexts of poverty, abusive families, alcoholic families, homelessness, chronic illness/ disability, teen mother, juvenile delinquency etc. Most research has been carried out on children. Research is described to have shifted from a focus on identifying outcome profiles of at risk groups to identifying and exploring protective factors associated with positive outcomes (Blum, 1998; Luthar et al. 2000; Masten, 2006; Miller, 1999; Ryff et al. 1998).

Methods

Methods used in the study of resilience are reported to have varied from intensive, detailed interviews to life event checklists (Masten et al. 2006). As discussed in an earlier section, longitudinal or prospective studies have provided the 'classic' evidence base for the area, and were suggested in 6 reviews as the most appropriate method due to the need to incorporate a life-course or developmental perspective (Blum 1998; Fergus & Zimmerman 2005; Glantz & Sloboda 1999; Luthar et al. 2000; Rutter 1993; Windle 1999). However, one author also commented that most studies have been cross-sectional (Blum 1998).

The most common approach for resilience researchers is suggested in 2 reviews to be a process of identifying vulnerability and protective factors that might modify the negative effects of adverse life circumstances and then identifying mechanisms or processes that might underlie associations found. (Luthar & Cicchetti 2000; Olsson et al. 2003). This approach is suggested mostly to involve the use of a quantitative scale correlated with outcome measures specific to the population and domain of resilience being studied (Tusaie & Dyer 2004). In 3 reviews multi-dimensional, standardised assessment scales were mentioned as a potential way forward for this kind of research process, although no such scales were reported to have been adequately developed (Blum 1998; Masten et al. 2006; Tusaie & Dyer 2004).

In terms of analysis, models capable of investigating multivariate, bidirectional interactions were considered to be the most appropriate and advanced approaches in 3 reviews e.g. structural equation modelling. (Condly 2006; Fergus & Zimmerman 2005; Windle 1999) In another paper, the different options of carrying out variable or person focused analysis were also highlighted (Garmezy 1993).

There were also a minority of suggestions of the potential utility of qualitative methods for exploring the dynamics of resilience (Tusaie & Dyer 2004; Ungar 2003), although qualitative methods are suggested by one author to have been barely utilised in this area (Ungar 2003)

Summary point 31

The most common approach for resilience researchers is suggested to be a process of identifying vulnerability and protective factors that might modify the negative effects of adverse life circumstances and then identifying mechanisms or processes that might underlie associations found. This mostly involves the use of a quantitative scale correlated with outcome measures specific to the population and domain of resilience being studied. Qualitative methods are seldom used (Blum 1998; Condly 2006; Fergus & Zimmerman 2005; Garmezy 1993; Glantz & Sloboda; Luthar & Cicchetti 2000; Masten et al. 2006; Olsson et al, 2003; Rutter 1993; Tusaie & Dyer 2004; Ungar 2003; Windle 1999)

Operationalisation.

The operationalisation of constructs such as risk, protection and positive adaptation is another important dimension in approaches to research on resilience, particularly given the apparent diversity in conceptualisations of resilience and the types of risk groups investigated in research. Perhaps not surprisingly then, there seems to have been considerable variability in the measures chosen to investigate resilience.

For example, outcome measures suggested to have been commonly used include; secure childhood attachments (for young children) (Luthar & Cicchetti 2000), mental health, functional capacity (the ability to carry out social roles such as school, work and marriage), social competence (the success of a person in achieving his or her aspirations), behaviour problems, drug abuse, and school failure (Blum 1998).

The level of functioning required for resilience to be inferred from any of these measures is of course a further issue. Suggestions here have included functioning above the norm scholastically and in peer relationships in young children, and in adolescents; accomplishments higher than the norm in career development, happiness, relationships with others, physical well-being and academic performance (Luthar & Cicchetti 2000; Tusaie & Dyer 2004).

In 3 reviews differences between research on competence and research on resilience were also discussed with respect to outcome levels. Researchers investigating competence are reported to define a competence item as one that measures achievements in meeting the major adaptational expectations of the age of subject in society (Aspinwall 2004; Garmezy 1993). In contrast, one review explained that in resilience research normative experiences do not generally qualify an individual for resilience, unless there is extreme adversity or risk (Masten et al. 2006). Likewise it has been suggested that optimal outcomes must be those most conceptually relevant to

the risk encountered; for example, in the case of serious adversity like exposure to war the absence of psychiatric distress can be a more logical outcome than excellence in functioning at school (Luthar & Cicchetti 2000). Similarly, where resilience has sometimes been defined on basis of an absence of psychopathology rather than presence of positive behaviours, this is suggested to generally have been in reference to individuals at risk for a mental illness or who are recovering from particular difficulties (Masten et al. 2006).

Summary point 32

There has been considerable variability in the measures chosen to investigate resilience e.g. secure childhood attachments, mental health, functional capacity, social competence, behaviour problems, drug abuse, and school failure. Outcomes must be conceptually relevant to the risk encountered (Aspinwall, 2004; Blum 1998; Garmezy 1993; Luthar & Cicchetti 2000; Masten et al 2006; Tusaie & Dyer 2004)).

Issues and implications with research

There were three major and inter-related sets of issues and implications identified in the literature which could be grouped as; inconsistency in approaches, the appropriateness of measures, the limited explanatory power of most research agendas.

Inconsistency in approaches

The absence of a unifying conceptual framework was highlighted as problematic by the authors of seven papers, who commented on the varied use of key terms like protective or vulnerability factors (Luthar & Cicchetti 2000; Luthar et al. 2000) and the diversity of risk status factors used to evaluate protective factors and resiliency processes (Windle 1999). This variability was seen not only to cause confusion (Olsson et al. 2003) but fundamentally to undermine the comparability of study findings. One criticism noted was the difficulties in determining what might constitute significant risk and relatedly whether comparable levels of adversity were experienced in any study (Luthar et al. 2000; Ungar 2003). It was similarly observed that whilst some researchers have required at risk children to excel in multiple adjustment domains to qualify for labels of resilience, others have required excellence in one sphere with average performance in another (Kaplan 1999; Luthar et al. 2000; Ungar 2003). In response to these problems several researchers have suggested a need to reach a consensus on key terms (Luthar et al. 2000), and to develop clear and more encompassing theoretical frameworks which might facilitate across study comparisons (Glantz & Sloboda 1999; Windle 1999). Similarly there were also calls for efforts to develop an empirically based taxonomy of risk and protective factors and resiliency processes (Windle 1999). Meanwhile, in the absence of any universally employed operationalisation of resilience it was recommended that researchers should be explicit about their approaches to definitions of adversity, competence etc (Luthar et al. 2000), and should state the possible limits of their conceptualisations (Glantz & Sloboda 1999).

Summary point 33

The inconsistency in approaches to defining and operationalising resilience is suggested to cause confusion and undermine the comparability of study findings (Glantz & Sloboda 1999; Kaplan 1999; Luthar and Cichetti 2000; Luthar et al 2000; Olsson et al 2003; Ungar 2003; Windle 1999)

Appropriateness of measures

As well as inconsistency in the operationalisation of resilience, further issues were also raised with regard to the appropriateness of measures used to investigate resilience. The issue of determining levels of risk and adaptation is again relevant here from the point of view of validity as well as comparability. 5 Papers commented on the problem of arbitrariness in the selection of outcome variables and described how most outcome measures used reflect the normative judgements and social values of dominant individualistic cultures, with scant attention often being paid to the socio-cultural contexts in which resilience occurs and likely differences in subjective definitions of desirable and undesirable outcomes (Delfabbro & Harvey 2004; Frydenberg 2002; Glantz & Sloboda 1999; Kaplan 1999; Ungar 2003). This was suggested to be especially true of approaches that use competence as a measure of resilience, as these measures assume a cultural reference point against which outcomes should be compared (Delfabbro & Harvey 2004).

Related to this issue, the authors of 4 papers suggested a need for greater attention to the particular socio-cultural and environmental contexts of study participants (Blum 1998; Delfabbro & Harvey 2004; Fergus & Zimmerman 2005; Murry et al. 2001). One author called for precision about the outcome variable of interest and the operationalisation of these constructs in value free language (Kaplan, 1999). One of these reviews also recommended the use of a definition of resilience based upon culturally and socially relevant ratings of success (Delfabbro & Harvey 2004).

Further problems identified with measurements of resilience relate to the need to conceptualise resilience as multidimensional and variable across time and context. In 4 reviews it was observed that too many studies are reported not to have used a multivariate approach in measuring domains under study, or to have taken measures over longer time scales. This is suggested to risk false conclusions and descriptions of resilient functioning (Blum 1998; Delfabbro & Harvey 2004; Luthar et al. 2000; Windle 1999). In response the authors of 6 papers have called for specificity of spheres of adaptation and multiple measures of risks and resources to be studied over longer time scales, paying particular attention to fluctuations (Fergus & Zimmerman 2005; Glantz & Sloboda 1999; Gorman-Smith & Tolan 2003; Kaplan 1999; Rutter 1993; Windle 1999).

Summary point 34

Issues have been raised with regard to the arbitrary selection of outcome variables, which are said to reflect the normative assumptions and social values of dominant middle class groups. Increased attention to the social and cultural contexts of different groups is recommended.

With respect to the need to conceptualise resilience as multidimensional and variable across time and context there have been calls for specificity regarding spheres of adaptation and multiple measures of risks and resources to be studied over longer time scales (Murry et al, 2001, 3-C; Blum, 1998; Delfabbro & Harvey 2004; Fergus & Zimmerman 2005; Glantz & Sloboda 1999; Gorman –Smith & Tolan 2003; Kaplan 1999; Luthar et al 2000; Rutter 1993; Ungar 2003; Windle 1999)

Limited explanatory power

A third commonly discussed problem with research was the limited explanatory power that previous and current research designs and frameworks afford in terms of understanding the mechanisms of the resilience process. Research on resilience has been criticised for lacking a theoretical base, (Kaplan 1999; Luthar et al. 2000). This is suggested to lead to greater dependence on identifying correlates of resilience, and limited capacity for developing causal explanations (Delfabbro & Harvey 2004; Kaplan 1999). The authors of 5 papers pointed out that simply listing mediating and moderating variables does little to increase understandings of the underlying causes of the outcome variable (Kaplan 1999; Luthar & Cicchetti 2000; Luthar et al. 2000; Sandler 2001; Ungar 2003).

Related to this issue one author described a need for researchers to develop a theoretical framework that accounts for the outcome (Kaplan 1999). In 7 reviews recommendations were made for some kind of 'interactive multi-factorial systems approach' (Glantz & Sloboda 1999) which is capable of investigating the interaction of factors and the mechanisms by which resilience occurs and which in turn can inform the design of appropriate prevention and intervention strategies (Delfabbro & Harvey 2004; Fergus & Zimmerman 2005; Glantz & Sloboda 1999; Luthar & Cicchetti 2000; Luthar et al. 2000; Sandler 2001; Ungar 2003). Some important advances were suggested to have been made in this respect, in terms of the refinement of measures, the inclusion of more contextually relevant variables, tools of analysis like structural equation modelling (Ungar 2003), and models that incorporate dynamic, bi-directional approaches (Windle 1999).

There were also some suggestions of a so far neglected role for qualitative research in exploring underlying mechanisms in the risk-resilience relationship (Fergus & Zimmerman 2005; Ungar 2003). In a paper focused on the role of qualitative methodology in research Ungar (2003) explains; qualitative methods are 'well suited to the discovery of the unnamed protective processes relevant to the lived experience of research participants; provide thick description of phenomenon in very specific contexts; elicit and add power to minority 'voices' which account for unique localized definitions of positive outcomes; promote tolerance for these localized constructions by avoiding generalizations but facilitating transferability of results; and require researchers to account for their biased standpoints'(Ungar 2003: 85). In another review there was also a call for a greater focus on the reports and experiences of people who appear to have overcome adversity (Delfabbro & Harvey 2004), and ethnographic methods and narrative accounts have similarly been advocated in the area of family resilience as a way of exploring the family belief systems and narrative processes that influence family coping and adaptation (Walsh 1996).

Summary point 35

A need was highlighted for research to move away from listing variables associated with positive outcomes and to start exploring underlying mechanisms and processes of adaptation and protection. Interactive statistical models and qualitative research is suggested to be a way forward for identifying and exploring these mechanisms. (Delfabbro & Harvey 2004; Fergus & Zimmerman 2005; Glantz & Sloboda 1999;

Luthar & Cicchetti 2000; Luthar et al. 2000; Sandler 2001; Ungar 2003; Walsh 1996; Windle 1999).

Sampling and focus of research

A final issue for research which was raised in some of the literature relates to sampling bias, sample characteristics and the general focus of research. Two reviews commented on the tendencies of research to rely on non-representative opportunity samples when researching at risk populations, and the obvious difficulties that this presents for generalising findings (Delfabbro & Harvey 2004; Murry et al. 2001). In spite of their high risk status, there have also apparently been few studies of resilience of minority groups (Miller 1999). Several authors have therefore called for research on the processes contributing to resilient adaptation in individuals from diverse background (Luthar & Cicchetti 2000), in particular research on the role and process of racial socialization/ racial identity as a protective factor (Miller 1999). Reflecting the fact that the vast majority of research has focused on children and adolescence there have similarly been calls for a focus on at risk groups later in life (Luthar & Cicchetti 2000; Ryff et al. 1998).

In a similar vein to the earlier point made on cultural biases in the selection of outcome variables, in two reviews it was also concluded that there has been too much of a focus on individual/ family factors in considerations of resiliency. One of these reviews commented on a neglect of wider contexts and structural forces with regard to health outcomes (Raphael 1996), whilst the authors of the other review described a disregard for structural influences on the adaptive responses and identities of disadvantaged minority groups (Stanton-Salazar & Spina 2000). The author of the former review subsequently recommends that increased attention is paid by researchers to societal and structural determinants of health (Raphael 1996), whilst the author of the latter review proposes a Critical Network Analysis perspective on resilience which considers structural influences on the perspectives and experiences of disadvantaged groups (Stanton-Salazar & Spina 2000). The value of an ecological risk/ protection model, with its person-process-context approach, was similarly suggested in another review, with specific reference to minority ethnic groups (Murry et al. 2001).

Summary point 36

Minority groups are reported to have been underrepresented in research on resilience, and it is also suggested that research on resilience has focused too much on individual factors and has not paid enough attention to ecological contexts and structural influences on behaviours and adaptations (Murry et al. 2001, 3-, C; Delfabbro & Harvey 2004; Luthar & Cicchetti, 2000; Miller, 1999; Raphael, 1996; Ryff et al, 1998; Stanton-Salazar & Spina, 2000).

Q2B: Coping

Areas and focus of research

Most of the discussion on research approaches related to the application and operationalisation of the transactional perspective, no doubt reflecting its dominance in the field. However, in one review there was discussion of both dispositional and transactional models, with some important and useful differences highlighted in terms of the focus and approach of research. Research carried out within a dispositional

framework was described as using indices which focus on how individuals are inclined to cope generally with adaptive demands, providing only limited information about coping choices that people use in specific stressful contexts. By contrast research on coping responses or skills is reported to have focused on understanding and measuring the coping responses that individuals employ in the context of specific stressful encounters (Moos & Holahan 2003). In the field of children's coping it was also suggested that whilst some research has been focused on describing normative coping processes other researchers have been seeking to determine how coping strategies are linked to adjustment (Fields & Prinz 1997).

In terms of groups or areas of study, one systematic review of research on adolescent coping (3-, C) reported specifically on the demographic information provided in studies of adolescent coping (Rosella, 1994). In this review the majority of studies investigated coping among both gender groups, but only 46.7 per cent reported information on socio-economic status (SES). Only 53 per cent reported information on racial composition, whilst minority groups were reported to be underrepresented in the studies that did provide this information (Rosella 1994, 3-,C). Two further studies similarly reported a neglect of black youth living in poverty (Outlaw 1993; Rosella & Albrecht 1993) , with one of the authors suggesting that researchers have been primarily concerned with studying the impact of major life events on individuals, instead of the everyday experiences such as racism, invidious discrimination and oppression that confront African Americans. That said the author also suggested that increased attention was starting to be paid to everyday 'hassles' because of increasing recognition of the powerful influences that these experiences hold for the well being of individuals (Outlaw 1993). This observation was similarly made in a more recent review which described an increased focus on daily hassles stemming from findings that an accumulation of small negative events were more predictive of health problems than major life events (Fields & Prinz 1997).

Summary point 37

Research carried out within a dispositional framework uses indices which focus on how individuals are inclined to cope generally with adaptive demands, whilst research on coping responses or skills focuses on understanding and measuring the coping responses that individuals employ in the context of specific stressful encounters.

Coping research has traditionally paid more attention to coping with life events, but increased attention is now starting to be paid to coping in the context of 'daily hassles'.

Low SES and minority ethnic groups have been found to be under represented in coping research (Rosella, 1994, 3-, C; Fields & Prinz, 1997; Moos & Holahan, 2003; Outlaw, 1993; Rosella & Albrecht 1993).

Methods

In one review it was observed that research into coping has almost exclusively involved using checklists, but that frustration with their limitations has sparked the recent development of process oriented approaches to daily coping, for example, the use of daily diary records (Aspinwall 2004). Certainly most of the relevant discussion in the literature revolved around the various checklists used, and the data obtained from the systematic review of adolescent coping supports this observation. In this

review 73.3 per cent of studies were reported to have used a closed questionnaire format whilst 26.7 per cent used open-ended formats. None of the studies used interviews (Rosella 1994, 3-,C)

Summary point 38

Most coping research involves the almost exclusive use of checklists and questionnaires (Rosella, 1994, 3-, C; Aspinwall, 2004).

Operationalisation

With regard to the format and content of questionnaires, in one review it was described how some measures ask respondents to report the coping response used in response to specific stressors (e.g. Folkman and Lazarus, 1988 cited in Aspinwall 2004), whilst other dispositional measures ask respondents to report what they characteristically do with stress (e.g. Carver et al, 1989 cited in Aspinwall 2004). Another less common type of measure is also described by the same author. This type of measure assesses an individual's skill in carrying out a given type of coping, for example, measures of social problem-solving skills (e.g. Fisher-Beckfield and McFall, 1982 cited in Aspinwall 2004) (Aspinwall 2004). With regard to the open-ended formats reported in the review on adolescent coping, subjects were asked to generate a list of all possible ways they could have handled or dealt with the stressful event and then asked to place a check next to each item that they used to cope with the event (Rosella 1994, 3-,C).

The author of one paper commented that situational measures have dominated coping research for twenty years, reflecting the dominance of the transactional paradigm in general. However, just as dispositional perspectives are reported to have re-emerged in recent years, dispositional measures are described also to have been developed. Some of these measures assess stability in responses across time and context, whilst others take account of both person and situation (Frydenberg 2002).

In one review examples were given of the main situational and dispositional measures in use. The main situational measures include the Coping Responses Inventory (CRI) and the Ways of Coping Questionnaire. Examples given of the main dispositional measures included the Coping Orientation to Problem Experience (COPE), Coping Inventory for Stressful Situations (CISS), NEO five-factor inventories, Life Orientation Scale and the Sense of Coherence Scale (SOC) (Moos & Holahan, 2003). In the review of adolescent coping both of these types of measures appear to have been used, including some modified child/ adolescent versions. For example, Adolescent Coping Orientation for Problem Experience (A-Cope) (Patterson and McCubbin, 1987 cited in Rosella 1994), Kidcope (Spirito, Stark and Williams, 1988 cited in Rosella 1994) (Rosella 1994, 3-,C).

Summary point 39

Most research on coping has involved using standardised checklists and scales. Questionnaires associated with transactional perspectives ask respondents to report the coping response used in response to specific stressors, whilst dispositional questionnaires ask respondents to report what they characteristically do with stress (Rosella 1994, 3-, C; Aspinwall, 2004; Frydenberg, 2002)

Issues and Implications with research

Issues and limitations with current research practices were discussed in several reviews with regards to measurement issues (Aspinwall 2004; Rosella 1994), as well as gaps in research in terms of under-represented groups (Rosella 1994; Rosella and Albrecht 1993)

Measures

With regard to measures, a first criticism levied at adolescent coping research was that the instruments were not used in a consistent manner in the period of time from which participants were asked to recall a stressor and the context from which the stressor was selected, thereby obviously limiting the comparability of findings.

The inapplicability of certain items contained in some of the questionnaires used was another criticism to emerge from this review, which made the point that items on scales developed on undergraduate students (e.g. WCI-R), would have little relevance to people from considerably different backgrounds. In a similar vein, the author also expressed disappointment that a deductive approach had been used to analyse open-ended questionnaires, most likely resulting in a loss of information from the original data. (Rosella 1994, 3- C)

A lack of sensitivity in the measurement scales is a further issue highlighted in the literature. Reflecting the criticism raised earlier on the neglect of content in transactional perspectives, coping research was also criticised for the lack of specific data that is captured through the inventories with regard to the character of stressors and coping responses, leaving uncertainty over exactly how and to what people are actually responding (Aspinwall 2004; Rosella 1994, 3-,C)

A second point relating to sensitivity, raised in both of these reviews, is regarding the absence of contextual measures in the questionnaires and the subsequent dearth of information on the social or environmental context of a stressful event or its meaning to the person (Aspinwall 2004; Rosella 1994). A similar mismatch between the complexity of the model and the simplicity of the measures is further suggested in the criticism that current approaches are unable to capture the complex recursive and interactive nature of relations of the different dimensions in the coping process (Aspinwall 2004).

These shortcomings are suggested to make it difficult to determine what made the event stressful, what people did to manage it and why and how specific ways of coping were related to later psychosocial and health outcomes (Aspinwall 2004). Related to this deficit this author recommends the use of idiographic approaches used in self regulation research. Such methods are argued to be capable of providing a much richer picture of people managing multiple goals and self conceptions and may provide greater insight into what is stressful to people, how people cope with adversity, and how such efforts are related to subsequent outcomes and resources. (Aspinwall 2004)

Recommendations for gathering more contextualised, relevant and meaningful information on coping were also made in the review on adolescent coping. The author of this review suggested that coping should be examined over a full range of stressors, as opposed to a single event, typical coping or hypothetical events, and that daily reports and qualitative methods should also be used to explore coping. The use of

inductive methods of analysis on any open-ended data was also recommended to minimise the loss of information from original data (Rosella 1994).

Sampling and focus of research

The other issue of concern discussed in three review articles was the neglect of low SES groups, in particular disadvantaged ethnic minority groups. In the systematic review of studies on adolescent coping only 46.7 per cent of studies reported information on SES and only 53 per cent on racial composition, with low SES and minority groups also reported to be underrepresented in studies where this information was provided (Rosella 1994, 3-, C). A similar dearth of research on the stress and coping of black and minority ethnic youth was similarly noted in three further reviews (Gonzales & Kim 1997; Outlaw 1993; Rosella & Albrecht 1993), with one review reporting that no studies could be found that examined the influence of racism on the stress and coping of African Americans (Outlaw, 1993).

This failure adequately to research and acknowledge these experiences is suggested to be likely related to the inability of health care providers to develop culturally specific assessments and interventions that facilitate effective coping patterns by African Americans (Outlaw 1993). In all four reviews there were calls and recommendations for research which investigates coping among youth from diverse disadvantaged groups (Gonzales & Kim 1997; Outlaw 1993; Rosella & Albrecht 1993; Rosella 1994, 3-,C).

Summary point 40

Issues raised with methods of research include; inconsistency in the application of questionnaires and the inability of the questionnaires to gather specific data on the character of the stressors and coping responses, or to gather information on the social and environmental context of a stressful event and its meaning to the person. Idiographic methods, daily reports and qualitative methods are recommended as a way of gathering more contextualised and meaningful data.

Research on the coping of disadvantaged and minority groups is also suggested to be lacking, prompting calls and recommendations for research which investigates coping among youth from diverse disadvantaged groups (Rosella 1994, 3-, C; Gonzales & Kim 1997; Outlaw 1993; Rosella & Albrecht 1993)

Q2C: Salutogenesis

Areas and focus of research

Due to the limited number of reviews on salutogenesis it is difficult to form a conclusive impression of the extent and nature of research in this area. Nonetheless all of the articles used for this review suggest research in this area to be primarily concerned with identifying correlates of a Sense of Coherence, whilst also making some effort to control for identified risk factors. Examples of correlated factors explored in some of the research discussed in these reviews included self-esteem, optimism and quality of life (Antonovsky, 1998), mental health and health promoting factors, and family factors (Hansson & Cederblad 2004). In another review, an example was also given of research which made reference to salutogenesis, although it did not explicitly explore Sense of Coherence. This research sought to identify the

characteristics of people's life and work situations among people who could be described as healthy (Udris et al. 1994).

Methods and measures.

The primary method of data-collection seems to be through the use of standardised scales and questionnaires to obtain measures of Sense of Coherence and associations with other outcomes or variables of interest. (Hansson & Cederblad 2004)

Antonovsky's "Orientation to Life Questionnaire", developed to measure Sense of Coherence, is reported to be widely used and to have both face validity and consensual validity, having been used and accepted by researchers in a range of different countries and contexts. Up until 1992, 42 studies are reported to have used the life orientation questionnaire/ sense of coherence, in at least 14 languages. Since Antonovsky's death in 1994 it is reported to have been used in 33 languages in 32 countries. Since 1994 around 15 alternative instruments have also been developed with different scoring systems. These include two questionnaires on 'family sense of coherence' and one adapted for the use of children. From the findings of a systematic review of research using the SOC scale, it is reported that most studies are cross-sectional, although some longitudinal studies were found. The study designs are either quantitative, qualitative or intervention, and in the data collection questionnaires, interviews (or both), focus groups, or experience sampling method have been used (Eriksson & Lindstrom 2005, 3-,B).

Summary point 41

Salutogenic research has primarily been concerned with identifying correlates of a Sense of Coherence, whilst also making some effort to control for identified risk factors. The primary method of data-collection seems to be through the use of standardised scales and questionnaires to obtain measures of Sense of Coherence and associations with other outcomes or variables of interest (e.g. Antonovsky's "Orientation to Life Questionnaire") (Eriksson & Lindstrom, 2005, 3-, B; Hansson & Cederblad, 2004; Udris et al. 1994)

Issues and implications with research

Due to the limited number of reviews identified on the subject there was very limited discussion around issues and implications for research. One issue which was identified by Antonovsky relates to the fact that although SOC is intended to be a construct that is structural and operative at a collective level, as well as an individual level, the SOC is unable to measure how sense of coherence is shaped by historical and structural processes of which individuals are a part, or how it may be reflected at a collective level. Rather than focusing only on individuals, the author suggests that research should look at ways in which collectivities think and respond, in particular given that many stressors are collective, for example, the closure of a major industrial plant and the threat of unemployment. Likewise, Antonovsky observes that it is not just individuals that sometimes fare well under adversity but also communities or neighbourhoods. Reflecting these concerns Antonovsky also argued for other methods to be used alongside the scales, such as life histories and in depth interviews,

which could better capture the complexities and provide better explanations for how SOC works in particular contexts (Antonovsky 1998)

Summary point 42

Current scales measuring SOC are unable to measure how sense of coherence is shaped by historical and structural process of which individuals are a part, or how it may be reflected at a collective level. Antonovsky argued for other methods to be used alongside the scales, such as life histories and in depth interviews, which could better capture the complexities and provide better explanations for how SOC works in particular contexts (Antonovsky 1998)

Q3: How have these three theories been applied in practice: what kind of initiatives are there and what are their core characteristics and rationales?

This section considers how the three theories and areas of research have been applied to practice based interventions. It is descriptive in its focus and does not include information on effectiveness. This type of data will be covered in Question Five. 18 papers on resilience (17 TLRs, 1 meta-analysis), 5 papers on coping (4 TLRs, 1 systematic review and 6 papers on salutogenesis (all TLR) were used to answer this question. These areas are considered separately and are organised into the following subheadings: rationale, interventions and approaches, issues and implications. It should again be noted that this last sub-section is reporting solely on the issues and implications identified in the literature, rather than the authors' own interpretation of the literature.

Q3A: Resilience

Rationale

Several reasons were presented for applying resilience research to practice based approaches. Firstly, it was suggested that prevention approaches in general are more effective than responsive treatment approaches to developmental problems (Luthar & Cicchetti 2000). Secondly, it was suggested that a focus on developing the assets and resources of at-risk children to facilitate their coping with risks and environmental stressors may be a) a more workable alternative to trying to eliminate the risk conditions and b) may be more fruitful in light of the important adaptive benefits that are derived from successful coping experiences (Minnard 2002; Olsson et al. 2003; Wolff 1995). A third reason cited in support of the potential of resilience based approaches is that increasing the number of protective influences can be linked with exponentially greater likelihoods of positive outcomes (Luthar & Cicchetti 2000).

Interventions and approaches

Most of the papers reviewed in this section described school or pre-school approaches which are aimed at fostering resilience. Two types of school approaches were identified and described in the literature; 'Life-skills training' and approaches based on more holistic 'social development models'.

Life Skills Training

Life Skills Training was discussed in 3 reviews and is described as a classroom-based program that focuses on general adolescent skill development and on developing skills for resisting social influences to use substances. This type of approach focuses on cognitive behavioural skills related to building self esteem, decreasing anxiety, communicating effectively, developing relationships and asserting rights. It is considered a resilience approach because it focuses on individual assets or protective factors associated with healthy development (Blum 1998; Fergus & Zimmerman 2005; Meschke & Patterson 2003).

Social development models

Whereas Life Skills Training is considered a person-centred strategy, social development approaches are considered to be system centred and to therefore incorporate but build on person-centred strategies. The rationale and characteristics of this kind of approach was discussed in 3 reviews (Blum 1998; Miller et al. 1998; Minnard 2002), all of which identified the following defining features of the approach: that there are perceived opportunities for participation, that students have the skills to participate actively, that they receive reinforcement for participation and the newly acquired skills and competencies are valued, and that there are high levels of social support (Blum 1998; Miller et al. 1998; Minnard 2002).

In three reviews core components and characteristic of examples of more systemic resilience building approaches were identified and discussed. In all three reviews common features included; efforts to enhance academic, cognitive and social skills, efforts to strengthen positive parenting practices, enhance family relationships, and increase family support and home-school bonding, and efforts to enhance participation, interaction and bonding with peers and adults in the classroom and wider school environment (Miller et al. 1998; Minnard 2002; Smokowski 1998).

In one review useful distinctions were also drawn between pre-school interventions and programs in elementary schools. Early childhood programs are described as disrupting the poverty risk-chain by encouraging strong relationships with teachers and parents, enhancing access to resources, and providing early cognitive stimulation, whereas elementary school programs tend more to address specific risk situations eg taking drugs. In these programs individual skill acquisition is a primary focus as they aim to enhance competence by building up resilience factors such as interpersonal, problem solving, cognitive, affective coping, and self-management skills, which in turn are suggested to advance the attainment of positive social goals and foster other protective factors such as self-esteem, self-efficacy, or supportive social networks. These 'skill' programs are suggested to be most effective when combined with substantive knowledge e.g. about drug risks. (Smokowski 1998)

Summary point 43

Life skills training and social development models are two school based resiliency approaches that were commonly discussed.

Life skills training is described as a classroom-based program that focuses on general adolescent skill development and on developing skills for resisting social influences to use substances.

Social development approaches are considered to be system centred and to therefore

incorporate but build on person-centred strategies like life skills training. They typically involve efforts to enhance academic, cognitive and social skills, efforts to strengthen positive parenting practices and increase home-school bonding, and efforts to enhance participation, interaction and bonding with peers and adults in the Classroom and wider school environment (Blum 1998; Fergus & Zimmerman 2005; Meschke & Patterson 2003; Miller et al. 1998; Minnard 2002; Smokowski 1998)

Other types of interventions

Other types of resilience promotion programs that were highlighted included programs related to youth substance use with a family focus. One such example was parent-training programs which involve providing reading material, instruction, modelling and providing reinforcement. Community focused programs were also described, with some examples of components including provision of community activities and recreation facilities (Meschke & Patterson 2003). In one of the systematic reviews considered in the next section youth mentoring programs were also discussed with reference to a resilience framework (Dubois, 2002, 1&2- C).

Family resilience and interventions

Several of the reviews focused on family resilience also highlighted some practical applications of the concept with regard to family therapy and clinical practice. These interventions aim to build family strengths as problems are addressed, thereby reducing risk and vulnerability. As the family becomes more resourceful, its ability to meet future challenges is enhanced. Resilience oriented services are concerned with building family resources to meet new challenges more effectively and every intervention is therefore also considered to be a preventive measures (Walsh 1996, 2002)

Summary point 44

Other practice based approaches discussed with reference to resilience included parent-training programs, community focused programs, mentoring programs and family therapy and clinical approaches. (Dubois, 2002, 1&2-, C; Meschke & Patterson, 2003; Walsh, 1996, 2002).

Issues and implications

For practitioners

A common charge levied at resilience interventions was one of 'educational faddism' (Doll & Lyon 1998; Luthar & Cicchetti 2000; Minnard 2002), on the basis that there has been a proliferation of idiosyncratic, piecemeal programs implemented with little regard for the depth or complexity of theory (Doll & Lyon 1998). These approaches have apparently focused only on improving isolated skills in children, often through short term, 'add on' programs which at their worst involve 'pull out' sessions for at risk children (Doll & Lyon 1998; Luthar & Cicchetti 2000; Pianta & Walsh 1998). Reflecting these concerns there were calls for multi-faceted, sustainable approaches which, as well as building skills, should focus on eliminating risk factors, promote a sense of efficacy, support and self worth, and should become integrated across the school (Doll & Lyon 1998; Luthar & Cicchetti 2000; Pianta & Walsh 1998; Sandler 2001).

It was also suggested that educators should recognise the school as a potential source of risk as well as protection for children and that they should attend to the interactive processes that are responsible for the response to risk, instead of conceptualising resilience as lying in the properties of the individual (Pianta & Walsh 1998). In another review a recommendation was also made that in addition to 'regular' skills training disadvantaged children should also be taught critical skills 'to decipher the hidden codes of our society and institutions', in order that coping skills are taught that are intellectually enlightening and self-empowering (Stanton-Salazar & Spina 2000). Writing from a developmental perspective another author also called for early childhood prevention and intervention programs aimed at developing strong, supportive, responsive and successful early parent-child relationships. (Yates et al. 2003).

Summary point 45

The main issue identified with regard to resilience interventions was the problem of 'educational faddism', a term used to describe short term, add on programs. It is recommended that programs should be integrated, multi-faceted and sustainable and should focus on building support as well as skills (Doll & Lyon 1998; Luthar & Cicchetti 2000; Minnard 2002; Pianta & Walsh 1998; Sandler 2001; Stanton-Salazar & Spina 2000; Yates et al. 2003)

For policy makers

At a policy level three reviews highlighted the need for greater resource distribution and a focus on employment and service provision in disadvantaged areas, reflecting a view that attention to wider structural influences is essential for reducing ecological risks and promoting protective processes in communities, families and individuals. (Patterson 2002; Raphael 1996; Sandler 2001).

For researchers

The need for more rigorous evaluations was also highlighted in several articles. Only a small number of evaluation studies were reported to have used random assignment, (Miller et al. 1998) or used longer term measurements (Stanton-Salazar & Spina 2000). Recommendations were therefore made for interventions to at least make use of comparison groups, which if not randomly assigned must delineate initial pre-test group differences (Luthar & Cicchetti 2000; Smokowski 1998). The difficulties in determining the effects of specific mechanisms in multi-component interventions were also described and the inclusion of detailed process evaluations were called for in intervention research (Luthar & Cicchetti 2000; Miller et al. 1998; Stanton-Salazar & Spina 2000).

Summary point 46

For policy several authors stressed a need for greater attention to structural influences in communities.

For research, a need for more rigorous and comprehensive evaluations of interventions was highlighted (Luthar & Cicchetti 2000; Miller et al. 1998; Patterson 2002; Raphael 1996; Sandler 2001; Smokowski 1998; Stanton-Salazar & Spina 2000).

Q3C: Coping

General rationale

In terms of explicitly stated rationales for interventions, it was suggested that programs could be designed to modify variables that are empirically supported as leading to better adaptation (Sandler et al. 1997) and that coping skills and approaches to appraisal can be taught (Pincus & Friedman 2004).

Interventions

Four categories of coping interventions to promote resilience and coping were identified in one review; enhancing of self-esteem, improving academic achievement, promoting social skills, and strengthening families and social supports (Smith & Carlson 1997). In another review several unifying features of interventions were similarly observed as; helping youth to become masters of own fate, problem solving skills, fostering links with social supports and comprehensive services. (Haggerty et al. 1996).

In a more detailed discussion of interventions two distinguishable approaches to intervention were identified; building stable coping resources and styles and assisting in coping with the tasks of specific stressful situations

The first type of intervention is aimed at teaching general skills which should improve children's ability to cope effectively when they encounter specific stressful events. The second kind of intervention is typically focused on what children think and do to handle demands of specific situations that threaten their wellbeing, and relates directly to cognitive appraisal or transactional models of coping. (Sandler et al. 1997) In a separate review it was also observed that most school based intervention programs focus primarily on teaching children about the problem solving "process" or about "direct action" types of problem solving strategies, and that much less is known about the effects of teaching children emotion-focused coping skills. (Pincus & Friedman 2004).

A third approach was also identified in interventions which enhance support, reflecting the rationale that perceptions of high levels of support from others, particularly parents, reduces the negative effects of stressors. Examples of this type of program included programs designed to enhance parents listening and empathy skills. (Sandler et al. 1997). In one of the systematic reviews used for the next section the author also describes five culturally sensitive family focused interventions for ethnic minority youth. Examples of such programs included parent-training programs which involved child-rearing, family management skills and facilitating strong parent-child bonds, as well as programs for infants and parents designed to promote social and intellectual competence. One cognitive-behavioural parenting skills training program was also described which incorporated a component on "pride in blackness" with an emphasis on positive communications about ethnicity, ethnic self-disparagement and ways to help children cope with racism (Gonzales & Kim 1997, 3- C).

Summary point 47

Three basic types of coping interventions are identified; the first type of intervention is aimed at teaching general skills which should improve children's ability to cope effectively when they encounter specific stressful events. The second kind of

intervention is typically focused on what children think and do to handle demands of specific situations that threaten their wellbeing, the third type is focused on enhancing support e.g. through parent-training and family focused interventions (Gonzales & Kim 1997, 3-,C; Haggerty et al 1996; Pincus & Friedman 2004; Smith & Carlson 1997).

Issues and implications

For researchers

Several key limitations and implications were identified in the discussion paper on interventions. Firstly it was noted that although there is a large literature which demonstrates the effectiveness of problem-solving and affect awareness skill training in relation to mental health outcomes, most have not studied their potential effects on coping strategies (Sandler et al. 1997). Secondly, and in a similar vein, these authors also comment on weak links between the theoretical and intervention research literatures, with few interventions having been designed specifically to change processes that have been empirically supported as protective against the negative effects of stress. Likewise it is observed that few evaluations have been designed to assess the theoretical mechanisms by which they affect problematic outcomes, and nor have they generally been successful in identifying mediating paths that account for the positive effects of programs. The authors of this review subsequently highlight a need for experimental tests of interventions which assess the mediating mechanisms which account for effects of the program on desired outcomes. (Sandler et al. 1997) In one of the other reviews, a relatively un-researched role for community and religious organizations in fostering coping and resilience was also noted, suggesting a potentially useful avenue for further research. (Smith & Carlson 1997).

No implications for policy or practice were explicitly identified in the literature used for this section.

Summary point 48

Recommendations were made for more rigorous, comprehensive and theoretically driven evaluations of interventions.

No implications for policy or practice were explicitly identified in the literature used for this section (Sandler et al 1997; Smith & Carlson 1997)

Q3c: Salutogenesis

General rationale

A general rationale for applying salutogenic theory to practice was identified in terms of a need for new approaches and interventions which can address increasing inequalities in health (Wallerstein 1992), as well as the growing trend in mental health related illness (Christiansen 1999). With regard to the first point it was suggested that as inequalities increase there is an increasing need to develop processes and interventions based on an understanding of what sustains health in conditions of chronic adversity; not just in the form of poverty but also in relation to inequality and the powerlessness associated with being positioned at the lower end of the gradient (Wallerstein 1992). On the second point, a report undertaken for the World Health

Organisation was referenced as projecting that in 2020 the major threats to well being will be depression and an increase of alcohol and self inflicted injury. The author of this review described these as ‘diseases of meaning’ that are linked to the development of social conditions that no longer provide the structures for identity, meaning and purpose in life. The author therefore suggests that interventions should be aimed at recreating structure and meaning in peoples lives (Christiansen 1999).

Interventions

Two types of intervention approaches were discernable in the literature; approaches aimed at strengthening resources and approaches aimed at creating meaning and order, although obviously there is overlap between the two.

Individual resources

One review highlighted how most health problems are self managed and that an increase in reliance on health care systems would be unsustainable. They concluded that there is a need for people to develop self management skills emphasising, in referring to Antonovsky, that stress can pose challenges which are important for individual health (Lamprecht & Sack 2003).

Community resources

Reflecting already expressed concerns with the structural dimensions of SOC this author highlighted community network interventions as a promising salutogenic approach. These were described as having taken 2 forms: promoting lay helpers and strengthening community-level problem solving mechanisms, which also enhances social networks. (Wallerstein 1992)

Meaning and control

Another application of SOC was described in 2 reviews with reference to the challenges of supporting an ageing population, for example, how residential and institutional settings can promote good quality of life in the face of physical deterioration and the emotional challenges that may accompany the ageing process (Christiansen 1999; Wiser 2005). One of these authors also pointed to research that suggests how changes to the environment can improve the prospects and well being of older people. Christiansen (1999) highlighted studies of residential nursing homes where residents were given more knowledge and control in what to expect in their lives than in the control home. Another study in the review similarly used ‘lifestyle redesign’ to engage subjects in activities which had meaning and structure.

Reviewers have also highlighted the value of salutogenic approaches for family and occupational therapy. Hansson and Cederblad (2004) argue that there is a need to learn from families who have learnt to thrive under adverse conditions in order to develop new therapeutic interventions. They conclude that there is enough evidence to suggest that the ‘sense of coherence’ concept provides a valuable base for family therapy. They argue that such an approach should build on the 3 sub-concepts of SOC, for example, by focusing on improving communication (comprehensibility), problem solving (manageability) and reflexive questioning (meaningfulness). Reflecting the general ‘strengths’ orientation of salutogenic theory the same authors also use a model called Absolute Salutogenesis in their work with adolescents, which focuses on competences rather than weaknesses (Hansson & Cederblad, 2004).

Summary point 49

Two types of intervention approaches were discernable in the literature; approaches aimed at strengthening resources (e.g. self-management skills, community networks) and approaches aimed at creating meaning and order (e.g. interventions to increase perceptions of control and therapy interventions) (Christiansen 1999; Hansson & Cederblad 2004; Lamprecht & Sack 2003; Wallerstein 1992; Wisner 2005)

Issues and implications

A couple of issues and implications were identified in the literature with regard to the practical applications of salutogenic theory. One author commented on the lack of evidence on what works with regard to interventions which target parenting style, and suggested that more research was needed on why interventions directed at the social environment have little effect on parenting factors, for example, why more support or improved housing may improve child growth but not parenting style (Taylor 2004). In the same vein as his earlier concerns over individualistic interpretations and applications of SOC, Wallerstein (1992) suggests that interventions which focus on individual level factors such as control, without changing the external environment, could lead to frustration, more feelings of powerlessness and more ill-health. It is suggested that interventions should therefore also target environmental and community level factors (Wallerstein 1992).

Summary point 50

One author commented on the lack of evidence on what works with regard to interventions targeting parenting style associated with positive health (Taylor 2004)

Another author suggests that interventions which focus on individual level factors such as control, without changing the external environment, could lead to frustration, more feelings of powerlessness and more ill-health. Recommends that interventions should therefore also target environmental and community level factors (Wallerstein 1992).

Summary: Section One

This summary draws together the three literatures discussed in this section by highlighting the main similarities and differences, and by highlighting the key implications for exploring the evidence base in the context of behaviour change and public health.

Similarities

The three literatures of resilience, coping and salutogenesis all share in common a focus on how people deal with and respond to various stressors and sets of circumstances. Although the coping literature is interested in negative as well as positive coping, all three literatures share a strong interest in the processes and factors contributing to positive outcomes and effects, and they all identify common resources which facilitate positive coping or adaptation. All three literatures also seem in the main to share a basic perspective of person-environment interaction, although there are also some differences here in terms of perspectives and theoretical frameworks.

Differences

In terms of differences a first key difference is that the mainstream coping literature appears much more short term in its focus than the other two literatures. Whereas the

resilience and salutogenesis literatures are interested in long term processes of adaptation, as it occurs over the life-course, most coping research appears to have been concerned with the immediate process of coping and the relative effectiveness of types of strategies in particular types of situations.

The resilience literature differs again from the other two literatures with regard to theory in so far as it lacks an established theoretical framework. Whereas models of coping and salutogenesis have clearly theorised processes and explanations of how people cope or adjust, the resilience literature appears to be largely based on observational findings of people overcoming adversity, with no dominant explanations of how and why particular protective factors function to influence adaptation.

A further difference can also be observed between the resilience and salutogenic literatures. Whereas salutogenesis and the sense of coherence construct are suggested to be more interested in the more structural determinants of behaviour, the resilience literature has been suggested to be more focused on individual and family influences, with less attention paid to wider factors.

A final difference worth noting in relation to this review is that salutogenesis is the only literature which is specifically and directly focused on health. The resilience literature in particular appears to have been more concerned with educational outcomes or more general adjustment outcomes such as social competence, although obviously such outcomes are likely also to be related to health.

Implications for behaviour change

By drawing together the three literatures some potentially important implications for behaviour change and public health can be identified, which now need to be explored in terms of empirical evidence.

These three areas of theory and research contribute to a knowledge base on how and why some people are able to achieve a level of functioning better than would be expected given their adverse circumstances. All three literatures propose resources and contexts which facilitate coping and adaptation. The literatures on salutogenesis and Sense of Coherence, and to a lesser extent coping, also provide theoretical frameworks which can guide an understanding of the various life choices that we make and the pathways that we pursue. These literatures seem to suggest that coping or adaptation occurs through processes of person-environment interaction, and salutogenic theory in particular suggests the importance of considering context and meaning when seeking to understand adaptation and life orientations.

In sum, the propositions of these theories, if empirically researched and supported, suggest opportunities for targeting alterable risk and protective factors, with various examples of such approaches and interventions already having been identified in Question Three. The next section therefore aims to explore the evidence on protective factors and on processes of coping and adaptation as well as evidence on the effectiveness of relevant interventions.

Some key limitations with the different literatures were also identified which should be considered when exploring the evidence base. For resilience the main issues

seemed firstly to be that it is variable across domains and contexts and that the outcome measures chosen to assess resilience often vary considerably between studies. A second issue was with regards to the arbitrary selection of outcome variables and a lack of attention to processes, mechanisms and contexts underlying adaptation. For coping, the main issue with research seemed to be that too little attention has been paid to the character of the stressor and also the relationship of coping to longer term adaptations.

With these issues in mind the following steps have been taken in our approach to the following section. In line with calls for domain specificity in resilience research, the outcome variables used in studies have where possible been listed and referenced at the start of each sub-section. With respect to the noted deficit of 'process' research, as linked to adaptation, a broad and open approach was also adopted with regards to the inclusion of evidence on adaptive processes, meaning that studies have been used which would probably be considered to be outside of the boundaries of research in these three areas, but which nonetheless provide evidence on processes of adaptation.

3.3: Section Two: Evidence on approaches to maintaining and generating health

This section aims to answer the following questions:

- 4) What evidence has been produced on the positive adaptation of people despite conditions of social-structural adversity?
- 5) What evidence is there on the effectiveness of interventions engaged in generating contexts and resources which might facilitate coping, resilience and positive development among disadvantaged groups?

Due to a dearth of systematic reviews on the subject, Question Four draws largely on evidence from traditional literature reviews. Summary points are made wherever evidence from TLRs alone is bought together. Evidence statements are presented to summarise evidence that is drawn either wholly or in part from systematic reviews and meta-analyses. Systematic reviews and meta-analyses alone have been used to address Question Five, and evidence statements are presented in this section.

Findings under Question Four are split into two sub-questions:

- What evidence is there on protective factors and processes that moderate or mediate relationships between structural disadvantage and developmental outcomes?
- What evidence is there on the processes and mechanisms underlying adaptation and coping?

Q4A: What evidence is there on protective factors and processes that moderate or mediate relationships between structural disadvantage and developmental outcomes?

Introduction

Evidence on protective factors or processes was provided in 39 reviews. This evidence was mostly derived from data from longitudinal and cross sectional studies, which identified factors associated with positive outcomes. 23 of these reviews were framed within a resilience framework, 5 within a coping framework, and 3 with reference to salutogenesis. Others reviews were located in ecological, transactional, empowerment, social support and self-efficacy theories.

A range of outcomes was used in studies across the different reviews. These included measures of psychological adjustment, mastery of developmental tasks, success at school, avoidance of problem behaviour, mortality and morbidity rates, physical health outcomes, mental health outcomes and health behaviours. As a result of our inclusion criteria all of the reviews used provide evidence on adaptation or positive development despite conditions of social-structural diversity. Generally this was done either through concentrating specifically on disadvantaged groups (27 reviews) or through controlling for SES in wider population based studies (12 reviews).

Only 6 of the reviews used for this question met the minimum four criteria to qualify as 'weak' systematic review, with the remainder of the evidence base (33) relying upon traditional literature reviews (TLR) considered to be 'very weak'. Where systematic reviews are used further information on the review and a quality and applicability score for each review is provided in the text. Therefore, unless otherwise stated all of the reviews referenced in this section should be assumed to be traditional literature reviews.

The vast majority of evidence used in the reviews appears to have been US based, but due to similarities in the structural, social and cultural contexts of the UK and the US, the evidence was considered to be applicable to the UK. However, due to a general dearth of this type of information provided in TLRs it is only the systematic reviews included in this section that have been graded on their applicability to the UK.

In spite of the weak evidence base there is considerable consistency across review findings, with most reviews distinguishing between protective factors at the individual level, family level and community level, and with clusters of factors observable within these broader levels of influences. As was suggested to be the case in the literature assessed in Section One, much of the evidence tended to simply list variables associated with positive outcomes, without saying much of the underlying mechanisms. However, in a few places evidence was also provided on some of the mediating pathways through which protective factors may take effect.

Individual Factors

There was considerable consistency across the reviews in terms of the individual level factors identified and in relation to a range of outcomes. Outcomes reported in these reviews included levels of psychological adjustment, (Coleman & Karraker 1998; Kitano & Lewis 2005; Murry et al. 2001; Pincus & Friedman 2004), the absence of significant delays or learning and behaviour problems, the mastery of developmental tasks and psychosocial stages (Werner 2000), substance use (Meschke & Patterson 2003), educational resilience (Wang et al. 1997, 1999), 'improved circumstances' (Pincus & Friedman 2004) and unspecified 'resilient' outcomes (Kitano & Lewis 2005; Nettle & Pleck 1996; Waxman et al. 2003).

The identified protective factors have been grouped into the following categories; 'positive identity factors' (e.g. self concept/ self esteem/social/ethnic identity), 'global beliefs' (e.g. religious beliefs, optimism, achievement motivation), 'control beliefs' (e.g. self efficacy, locus of control), 'personality traits' (e.g. temperament) and 'skills and capabilities' (e.g. intelligence, social skills). It is important to note that these categorisations are only to aid clarity and should be thought of as overlapping and interrelated as opposed to distinct.

Positive identity factors

Evidence on positive self concept and high self esteem as factors protective against the effects of adversity or promotive of positive outcomes was provided in seven reviews. Three of these reviews cited self-esteem as a factor (Murry et al. 2001; Stewart et al. 1997); five reviews cited self concept as a factor (Edari & McManus 1998; Kitano & Lewis 2005; Wang et al. 1997; Waxman et al. 2003; Werner 2000). One of these reviews was a systematic review (3- C). This review considered studies of African-American single mothers and cited evidence which suggests that maternal self-esteem positively affects the psychological adjustment of the child (Murry et al. 2001, 3- C).

In one review, however, study findings were also cited to suggest the self-esteem of black students to be comparable with levels of white students, suggesting that lower self esteem may not account for the generally poorer school performance of black students, and that other factors may be more important for this group (Nettle & Pleck 1996).

Evidence on the role of positive racial or ethnic identity as protective against the effects of poverty, racism and discrimination was highlighted in 7 reviews (Gonzales & Kim 1997; Samaan 2000; Szalacha et al. 2003; Villenas & Deyhle 1999; Wallace 1999; Williams et al. 2003; Yoshikawa & Seidman 2000). 2 of these reviews were systematic reviews. One of these reviews (3-,C) explored studies which looked at the influences of race, ethnicity and poverty on the mental health of children in the US (Samaan 2000). Study findings demonstrated protective factors against mental illness in ethnic groups who were same SES groups as their white counterparts, leading the author to conclude that buffers against psychological distress exist and function within cultural mechanisms (Samaan 2000, 3- C). The other review (3- C) considered evidence from community studies on the relationship between racial/ ethnic discrimination and health. In this review the findings of 5 studies were relevant to the topic area, all of which suggest racial consciousness as a protective factor. The authors suggest that beliefs about one's self and the environment are individual factors that might affect appraisals of stress and that racial consciousness and identity might function in this way for race related stressors. (Williams et al 2003, 3- C).

Several of these reviews also provided more detailed pieces of (mostly) qualitative evidence, which may explain how and why ethnic identity and racial consciousness may be protective. One reason suggested was the pride and positive self concept that followed from developing a positive orientation towards ones own group (Gonzales & Kim 1997; Szalacha et al. 2003), whilst another commonly cited finding was the important protective function of critical racial consciousness and understandings of power structures. These are reported to facilitate coping with the psychological

assaults of racism, prejudice and discrimination, with an important coping resource suggested to be external ‘system-blame’ attributions of failure, which may help cushion the blow to self-esteem (Gonzales & Kim 1997; Nettle & Pleck 1996; Szalacha et al. 2003; Yoshikawa & Seidman 2000). In support of this, evidence was reported that African American adolescents consistently report that they are more external in their control beliefs, and that external locus of control is not related to low self esteem or poor mental health for this group (Gonzales & Kim 1997).

However, in one review, study findings were reported which suggested that critical consciousness, without the perception of opportunities to overcome oppression, may be associated with lower aspirations, self esteem, and academic achievement (Yoshikawa & Seidman 2000). In another article, review findings were also cited which seem to contradict suggestions of the protective influence of racial or ethnic identity. These findings reported that that bi-cultural/ race-less identities among African Americans foster educational resilience, whilst oppositional social identities, characterised by responses to racism, were a source of vulnerability in school settings. What this may in fact be highlighting is the multi-dimensional nature of resilience, as discussed in Section One. This is further suggested in the same study finding that a ‘race-less’ identity, useful in the school setting, may put black students at risk of poor social development (Nettle & Pleck 1996), as well as possible variations between ethnic groups and identities.

Evidence statement 1

There is evidence from 7 studies that high self-esteem (Murry et al. 2001, 3- C; Edari & McManus 1998; Stewart et al. 1997) and positive self-concept (Edari & McManus 1998; Kitano & Lewis 2005; Wang et al. 1997; Waxman et al. 2003; Werner 2000) are protective against the effects of adversity and promotive of positive outcomes.

Evidence statement 2

There is evidence from 7 reviews that a positive ethnic or racial identity is protective against the effects of adversity for minority ethnic groups (Samaan 2000, 3- C; Williams et al 2003; 3- C; Gonzales & Kim 1997; Szalacha et al. 2003; Villenas & Deyhle 1999; Wallace 1999; Yoshikawa & Seidman 2000)

Global beliefs

Evidence on religious beliefs as an individual level protective factor was highlighted in two reviews (Meschke & Patterson 2003; Werner 2000) (see also later section on religion as a protective factor). Evidence on other ‘outlook’ or ‘orientation’ factors included positive orientation to one’s surroundings (Edari & McManus 1998), optimism (Stewart et al. 1997), high educational expectations (Nettle & Pleck 1996; Wang et al. 1997; Waxman et al. 2003), strong achievement motivation (Nettle & Pleck 1996; Wang et al. 1999; Werner 2000).

Summary point 51

There is evidence from 2 reviews that religious beliefs function as an individual level protective factor (Meschke & Patterson 2003; Werner 2000) .

Evidence provided on other ‘outlook’ or ‘orientation’ factors included positive orientation to one’s surroundings (Edari & McManus 1998); , optimism (Stewart et al 1997), high educational expectations (Nettle & Pleck 1996; Wang et al. 1997; Waxman et al. 2003), strong achievement motivation (Nettle & Pleck 1996; Wang et al. 1999; Werner, 2000).

Control beliefs

An internal locus of control, feeling of control over one’s life, or sense of power was suggested to be protective in 6 reviews (Edari & McManus 1998; Kitano & Lewis 2005; Murry et al. 2001; Stewart et al. 1997; Taylor & Seeman 1999; Werner 2000). One of these reviews was a systematic review (3- C). This review considered studies of African-American single mothers and cited evidence which suggests that a strong sense of control positively affects the psychological adjustment of the child (Murry et al. 2001, 3- C).

However, in one review one study was cited which found that internal locus of control differentiated resilient from stress affected children among white but not African-American participants (Kitano and Lewis 2005). This supports the finding cited earlier that although African American adolescents consistently report that they are more external in their control beliefs, external locus of control is not related to low self esteem or poor mental health for this group (Gonzales & Kim 1997). In another review it was similarly suggested that differences in locus of control could not account for the generally poorer school performance of blacks compared with whites, although this observation was based on the seemingly contradictory finding that internal locus of control was comparable between white and black students (Nettle & Pleck 1996).

Evidence on the importance of self-efficacy was also highlighted in two reviews. In these reviews high levels of maternal self-efficacy or perceptions of competence was suggested to moderate the effect of disadvantage on maternal competence and child adjustment (Coleman & Karraker 1998; Murry et al. 2001). One of these reviews was a systematic review (3- C). This review considered studies of African-American single mothers and cited evidence which suggests that high levels of maternal self-efficacy positively affects the psychological adjustment of the child (Murry et al. 2001, 3- C).

Evidence statement 3

There is evidence from 6 reviews that an internal locus of control is protective against the effects of adversity (Murry et al. 2001, 3 -, C; Edari & McManus 1998; Kitano & Lewis 2005; Stewart et al. 1997; Taylor & Seeman 1999; Werner 2000). However evidence from 3 reviews suggests that locus of control may not contribute to resilience among black students (Gonzales & Kim 1997; Kitano & Lewis 2005; Nettle & Pleck 1996).

There is evidence from 2 reviews that maternal self efficacy is protective against the effects of adversity (Murry et al. 2001, 3-, C; Coleman & Karraker 1998).

Personality traits

An easygoing temperament was identified as a protective influence in three reviews (Edari & McManus 1998; Stewart et al. 1997; Werner, 2000), and curiosity, flexibility and adaptability were identified as three further personality factors in one of the reviews (Edari & McManus 1998).

Summary point 52

There is evidence from 3 reviews that an easygoing temperament is protective against the effects of adversity (Edari & McManus 1998; Stewart et al. 1997; Werner, 2000).

Skills and capabilities

Protective factors identified here included general competence (Edari & McManus 1998; Kitano & Lewis 2005; Meschke & Patterson 2003), social competence (Stewart et al. 1997), social skills (Edari & McManus 1998; Meschke & Patterson 2003; Wang et al 1997; Wang et al. 1999), intelligence and academic skills (Edari & McManus 1998; Kitano & Lewis 2005; Meschke & Patterson 2003; Stewart et al. 1997; Werner 2000), cognitive skills and processes (Stewart et al. 1997; Wang et al. 1999), planning (Werner 2000), problem solving abilities (Edari & McManus 1998; Pincus & Friedman 2004; Stewart et al. 1997), and other coping skills (e.g. advanced self help skills in early childhood and the ability to distance one self from troubled family life) (Werner, 2000). In one review article active coping is reported to be associated with improved circumstances among at risk children (Southwick et al. 2005), whilst in another of the reviews it is suggested that use of multiple coping responses (emotion and problem) is a predictor of psychological adjustment, although it should be noted that no information was provided on how such responses relate to different SES groups. (Pincus & Freidman 2004).

Attention should also be drawn to findings described in one review which reported that intelligence could also serve as a vulnerability factor in high risk, inner city adolescents, when measures of emotional and social competence were used to determine resilience. This supports the point raised in Section One regarding resilience as a multidimensional and context specific construct (Kitano & Lewis 2005).

Summary point 53

There is evidence from 8 reviews that the following skill and capability factors are protective against the effects of adversity:

- General and social competence (4 reviews) (Edari & McManus 1998; Kitano & Lewis 2005; Meschke & Patterson 2003; Stewart et al.1997),
- Social skills (4 reviews) (Edari & McManus 1998; Meschke & Patterson 2003; Wang et al. 1997, 1999)),
- Intelligence and academic skills (5 reviews) (Edari & McManus 1998; Kitano & Lewis 2005; Meschke & Patterson 2003; Stewart et al 1997; Werner 2000).

- Cognitive skills and processes (3 reviews) (Stewart et al. 1997; Wang et al 1999; Werner 2000).
- Problem solving abilities and coping skills (5 reviews) (Edari & McManus 1998; Pincus & Friedman 2004; Southwick et al. 2005; Stewart et al. 1997; Werner 2000))

However, there is some contradictory evidence reported in one review which suggests that intelligence could also serve as a vulnerability factor for high risk, inner city adolescents (Kitano & Lewis 2005)

Pathways

Reporting on findings from the Kauai longitudinal study (Werner, 1993) one author described how continuities and links were observed in the study data between individual level protective factors and successful adaptation in high-risk children and youths. These continuities led the researcher to conclude that individual dispositions led resilient children to select or construct environments that, in turn, reinforced and sustained their active, outgoing dispositions and that rewarded their competencies. (Werner 2000)

Summary point 54

There is evidence from 1 review that individual dispositions led resilient children to select or construct environments that, in turn, reinforced and sustained their active, outgoing dispositions and rewarded their competencies (Werner 2000)

Family factors.

Consistent findings on protective factors were also evident at the family level. Outcomes reported in these reviews included psychological adjustment (Demo & Cox 2000; Murry et al. 2001; Nettle & Pleck 1996), educational resilience (Wang, 1997, Wang, 1999), delinquent behaviour and pro-social development (Roosa et al. 2003), aggression, anxiety and depression (Gorman-Smith & Tolan 2003), allostatic load (Szanton et al. 2005), family functioning and child development (Murry et al. 2001), the absence of significant delays or learning and behaviour problems, the mastery of developmental tasks and psychosocial stages (Werner, 2000). The identified protective factors seemed to fall into the following categorisations: Supportive environments (e.g. parent-child attachments, intra-familial relations, kinship networks), family practices (e.g. parenting approaches, norms and values) and resources. Again, these groups should be thought of as overlapping and interrelated rather than distinct.

Supportive family environments

Evidence on the importance of strong and enduring parent-child relationships as protective factors affecting adjustment were highlighted in 7 reviews (Gonzales & Kim 1997; Murry et al. 2001; Stewart et al. 1997; Wandersman & Nation 1998; Wang et al. 1997, 1999; Werner 2000). In 9 reviews, cohesive, warm, supportive and communicative family environments were similarly highlighted as family features which are protective against the effects of disadvantage (Edari & McManus 1998; Gonzales & Kim 1997; Gorman-Smith & Tolan 2003; Lynch 2003; Meschke &

Patterson 2003; Szanton et al. 2005; Taylor & Wang 2000; Wang et al. 1997; Yoshikawa & Seidman 2000). Evidence on the important role of extended kin networks in buffering the effects of stress was provided in 8 reviews (Edari & McManus 1998; Gonzales & Kim 1997; McDermott & Graham 2005; Murry et al. 2001; Roosa et al. 2003; Stewart et al. 1997; Taylor et al. 2002; Werner 2000) and were highlighted as being particularly important for minority ethnic families (Gonzales & Kim 1997; Murry et al. 2001). In one review, evidence was reported that minority adolescents are more likely to rely on extended family members for support, although it was also observed that there had been little empirical examination of the relation between extended kin and children's mental health. (Gonzales & Kim 1997; Murry et al. 2001). Only one review provided evidence on the mediating influences of kinship networks, which highlighted how these networks provide African-American mothers with goods, services and socio-emotional support (as well as also sometimes being a source of stress and conflict) (Murry et al. 2001).

3 of these reviews are systematic reviews. One review (3-,C) considered studies of African-American single mothers and cited evidence which suggests that the quality of mother-child relationships, and extended kinship networks positively affect the psychological adjustment of the child and family functioning (Murry et al. 2001, 3-,C). Another review (3-, C) investigated the relationship between SES and allostatic load. In the only piece of evidence of relevance to this review, 1 study using longitudinal data is reported to have found that positive relationships with parents/spouse were protective against high allostatic load scores even in the context of low income, but that high income was protective against high allostatic load scores despite negative parental or spousal relationships (Szanton et al. 2005, 3-, C). The third review (3-, A) reviewed qualitative research on 'resilient' young mothers in the UK and described the important role of kinship networks in providing vital support to young mothers, particularly during difficult times (McDermott & Graham 2005, 3-A)

Evidence statement 4

There is evidence from 18 reviews that a supportive family environment is protective against the effects of disadvantage. More specifically:

There is evidence from 7 reviews that strong parent-child relationships affect adjustment (Murry et al. 2001, 3 -, C; Gonzales & Kim 1997; Stewart et al. 1997; Wandersman & Nation 1998; Wang et al. 1997, 1999; Werner, 2000).

There is evidence from 9 reviews that cohesive, warm, supportive and communicative family environments are protective against the effects of disadvantage (Szanton et al 2005; 3-,C; Edari & McManus 1998; Gonzales & Kim 1997; Gorman-Smith & Tolan 2003; Lynch 2003; Meschke & Patterson 2003; Taylor & Wang 2000; Wang et al. 1997; Yoshikawa & Seidman 2000)

There is evidence from 8 reviews that extended kinship networks are protective against the effects of adversity (Murry et al. 2001, 3-, C; McDermott & Graham, 2005, 3-, A; Edari & McManus 1998; Gonzales & Kim 1997; Roosa et al. 2003; Stewart et al. 1997; Taylor & Wang 2000; Werner 2000)

1 review provided evidence that the effects of kinship networks are mediated by the

provision of goods, services and socio-emotional support (Murry et al. 2001, 3-, C)

Family practices

Family practices and approaches identified as protective against the effects of poverty and high risk environments included; nurturing and supportive care giving (Demo & Cox 2000; Nettle & Pleck 1996; Stewart et al. 1997), nurturing motivation, high expectations and support for achievement (Meschke & Patterson 2003; Nettle & Pleck 1996; Stewart et al. 1997; Taylor & Wang 2000, Wang et al 1999) encouraging participation in family life and assigned chores (Wang et al. 1997, 1999; Werner 2000;) structured parenting, consistently enforced rules and discipline (Demo & Cox 2000; Nettle & Pleck 1996; Wang et al 1999) authoritative parenting (Meschke & Patterson 2003; Murry et al. 2001; Nettle & Pleck 1996; Taylor & Wang 2000; Yoshikawa & Seidman 2000), strong parental supervision and monitoring (Edari & McManus 1998; Lynch 2003; Nettle & Pleck 1996; Roosa et al 2003; Taylor & Wang 2000; Yoshikawa & Seidman 2000).

Two of these reviews are systematic reviews. One review (3-,C) considered studies of African-American single mothers and cited evidence which suggests that authoritative parenting positively affects the psychological adjustment of the child and family functioning (Murry et al. 2001, 3-,C). The other review (3- C) is a review of research evidence on families with young children. In this review the few studies cited on protective factors point to consistent parental support and discipline as mediating between risk/ poverty and adjustment (Demo & Cox 2000, 3- C).

In one review, findings of qualitative studies were also discussed, providing some new insights into protective parenting practices. These included; parental persistence, parental restrictiveness, direct family protection strategies, social isolation (as a way of protecting children from negative influences), ideological support for mainstream orientations and seeking resources for children outside neighbourhood. (Roosa et al. 2003) In three reviews the protective role played by the family in the ethnic socialization of children was also discussed. As also discussed earlier, this process is suggested to help children to develop a positive ethnic or racial identity and to help them to cope with the effects of racism and discrimination, with study findings reported that minority parents in general often talk directly to their children about these issues (Gonzales & Kim 1997; Nettle & Pleck 1996, Yoshikawa & Seidman 2000).

Some gender and ethnic differences were also observed. In a review of longitudinal studies, at least 2 studies provided evidence that an emphasis on autonomy with emotional support from the primary caregiver was more effective for girls, whilst for boys an emphasis on structure and rules was considered more effective (Werner, 2000). It was also noted that restrictive and authoritative parenting, whilst showing positive effects in all other domains of adjustment, showed less affect for school achievement of African-American students than for other groups. (Taylor & Wang 2000)

Evidence statement 5

There is evidence from 3 reviews that nurturing and supportive care giving is protective against the effects of poverty (Demo & Cox 2000, 3- C; Nettle and Pleck 1996; Stewart et al. 1997).

Evidence statement 6

There is evidence from 5 reviews that nurturing motivation, high expectations and support for achievement is protective against the effects of poverty (Meschke & Patterson 2003; Nettle & Pleck 1996; Stewart et al. 1997; Taylor & Wang 2000; Wang et al. 1999).

Evidence statement 7

There is evidence from 12 reviews that the following practices are protective against the effects of poverty:

- Encouraging participation in family life and assigning chores (3 reviews) (Wang et al. 1997, 1999; Werner 2000)
- Structured parenting, consistently enforced rules and discipline (3 reviews) (Demo & Cox, 3-, C; Nettle & Pleck 1996; Wang et al. 1999)
- Authoritative parenting (5 reviews) (Murry et al 2001; 3-,C; Meschke & Patterson 2003; Nettle & Pleck 1996; Taylor & Wang 2000; Yoshikawa & Seidman 2000)
- Strong parental supervision and monitoring (6 reviews) (Edari & McManus 1998; Lynch 2003; Nettle & Pleck 1996; Roosa et al. 2003; Taylor & Wang 2000; Yoshikawa & Seidman 2000)

Evidence statement 8

There is evidence from 3 reviews that the process of ethnic socialization helps minority ethnic children to develop a positive identity and helps them to cope with the effects of racism and discrimination (Gonzales & Kim 1997; Nettle & Pleck 1996; Yoshikawa & Seidman 2000).

Evidence statement 9

There is evidence from 1 review that an emphasis on autonomy with emotional support from the primary caregiver is more effective for girls, whilst for boys an emphasis on structure and rules is more effective (Werner 2000).

Physical and human resources

In several reviews the significance of resource availability and physical space were also discussed and associations were reported between small family size (<4 children), mothers education, maternal competence and positive adjustment (Edari & McManus 1998; Lynch 2003; Wang et al. 1999; Werner 2000).

Summary point 55

There is evidence from 4 reviews that human resources, such as mother's education and maternal competence, and physical space and size of family, moderate the impact

of disadvantage on children's adjustment (Edari & McManus 1998; Lynch 2003; Wang et al. 1999; Werner 2000) .

Community factors

Consistent findings on protective factors were similarly evident at the community level.

14 reviews provided evidence on the buffering or moderating effect of social networks and social support in relation to disadvantage and a wide range of outcomes. These outcomes included; level of violence in the community (Edari & McManus 1998), differences in family functioning (Gorman-Smith & Tolan 2003), mortality and morbidity rates (Berkman 1995; Sarason et al. 1997), physical health outcomes (George et al. 2002; Southwick et al. 2005), mental health outcomes (Fratiglioni et al. 2004; Murry et al. 2001; Samaan 2000), successful development (e.g. pro-social development and avoidance of problem behaviour) (Meschke & Patterson 2003; Nettle & Pleck 1996; Roosa et al. 2003; Wandersman & Nation 1998) and health behaviours (Stewart et al. 1997). Two of these reviews are systematic reviews. One review (3-,C) explored studies of African-American single mothers (Murry et al. 2001). The main findings of relevance to this section is that mothers perception of greater neighbourhood resources positively related to adolescents' self reliance, self esteem and other measures. The other review (3-,C) considers evidence on the influences of race, ethnicity and poverty on the mental health of children. The review reported findings which demonstrated protective factors against mental illness in ethnic groups who were the same SES as their white counterparts, and which led the author to suggest that buffers against psychological distress exist and function within cultural mechanisms and strong social relationships (Samaan, 2000).

Evidence statement 10

There is evidence from 14 reviews that social networks and social supports have a moderating effect on the relationship between disadvantage and a wide range of outcomes (Murry et al, 3-,C; Samaan 2000, 3-C; Berkman 1995; Edari & McManus 1998; Fratiglioni et al. 2004; Gorman-Smith & Tolan 2003; George et al. 2002; Meschke & Patterson 2003; Nettle & Pleck 1996; Roosa et al. 2003;; Sarason et al. 1997; Southwick et al. 2005; Stewart et al. 1997; Wandersman and Nation 1998)

More specific evidence was also retrieved on the likely mediators of community effects, which could again be categorised into overlapping and inter-related groups and subgroups; 'psycho-social effects' (felt social support/cohesion and sense of belonging), 'collective efficacy' (informal supports, collective action) and 'cultural norms'.

Psychosocial factors

Evidence was provided on the significance of felt social support and neighbourhood cohesion in 6 reviews, which between them highlighted the important role of positive relationships in providing emotional support and caring with regard to children, teenagers and adults (Murry et al. 2001; Roosa et al. 2003; Samaan 2000; Wandersman & Nation 1998; Wang et al. 1999; Werner 2000). Two of these reviews are systematic reviews. One review (3-, C) reported findings that social support and

kinship networks positively affect the adjustment of the children of single African-American mothers by providing goods, services and socio-emotional support (Murry et al. 2001, 3-, C). The other review (3-, C) also suggested the importance of supportive relationships in buffering against the psychological distress of minority ethnic groups (Samaan 2000)

The important role of community in providing a 'sense of belonging' and 'connectedness' was also suggested in 5 reviews (Edari & McManus 1998; Gorman-Smith & Tolan 2003; Meschke & Patterson 2003; Wallace 1999; Yoshikawa & Seidman 2000). For example in one review it was explained how greater involvement in black social networks and higher levels of black awareness predicted lower alcohol use among black people (no other characteristics provided) (Wallace 1999), whilst in another review ethnographic research on immigrant neighbourhoods was cited which suggested the importance of Vietnamese and Cuban community organisations in contributing to strong identity and the mobility and academic success of people within those communities (Yoshikawa & Seidman 2000). These examples, in particular, link back to earlier pieces of evidence on the protective influence of racial and ethnic identity, which can also be seen as relevant here (Gonzales & Kim 1997; Samaan 2000; Szalacha et al. 2003; Villenas & Deyhle 1999; Wallace 1999; Williams et al. 2003). This example therefore also serves as a good example of how individual level factors are shaped by the wider social and cultural contexts in which people live, thereby highlighting the inter-relatedness of these different level factors (ie individual, family, community level factors).

Evidence statement 11

There is evidence from 11 reviews that social networks influence psychosocial factors which are important to wellbeing.

These factors include;

Emotional support and caring (6 reviews) (Murry et al, 3-,C; Samaan 2000, 3-,C; Roosa et al. 2003; Wandersman & Nation 1998; Wang et al. 1999; Werner 2000)

A sense of belonging and connectedness (5 reviews) (Edari & McManus 1998; Gorman-Smith & Tolan 2003; Meschke & Patterson 2003; Wallace 1999; Yoshikawa & Seidman 2000)

Collective efficacy;

Evidence was provided in 5 reviews on the role played by informal support systems and collective activity in disadvantaged communities. One review reported findings that collective efficacy, defined as the willingness of residents to intervene for common good, explained much of relationship between neighbourhood characteristics and violence (although no figures were provided) (Wandersman & Nation 1998). Examples given of informal supports included providing goods and services, with specific reference made to child care and control/ monitoring of adolescents (Gorman-Smith & Tolan 2003; Hastings et al. 2005; Murry et al. 2001; Roosa et al. 2003; Wandersman & Nation 1998). The only systematic review used

here (3-, C) reported findings that social support and kinship networks positively affect the adjustment of the children of single African-American mothers by providing goods, services and socio-emotional support (Murry et al. 2001, 3-, C).

In a review of ethnographic studies of Latino families, a process of individual and community empowerment through collective action and engagement with the education system was also described. The authors of this review suggest this to be the only route through which marginalised communities can hope to achieve change (Villenas & Deyhle 1999). These pieces of evidence therefore suggest that social, political and economic gains, achieved via community organisation and mobilisation, could serve as another mediating pathway for community effects.

Evidence statement 12

There is evidence from 6 reviews that social networks provide informal supports and aid collective efficacy, which can contribute to the 'common good' (Murry et al. 2001, 3-,C; Gorman-Smith & Tolan 2003; Hastings et al. 2005; Roosa et al. 2003; Villenas & Deyhle 1999; Wandersman & Nation 1998).

Cultural norms

There was also evidence suggested on the mediating effect of cultural norms and values. Positive examples included consistently expressed high expectations and pro-social norms in the community (Edari & McManus 1998; Wang et al. 1999), the protective influence of peers with positive attitudes towards education (Taylor & Wang 2000; Wang et al. 1999; Yoshikawa & Seidman 2000) and conservative drinking norms found in black and Hispanic communities with strong social networks and more traditional cultural and religious norms, values and beliefs (Wallace 1999).

Summary point 56

There is evidence from 5 reviews that strong community networks can foster cultural norms which contribute positively to development and health behaviours (Edari & McManus 1998; Taylor & Wang 2000; Wallace 1999; Wang et al. 1999; Yoshikawa & Seidman 2000).

Structural moderators

There is considerable evidence on the moderating effects of social networks and social supports on outcomes linked to deprivation. However, in 4 reviews the structural characteristics of neighbourhoods were also suggested to moderate the relationship between disadvantage and community characteristics (e.g. social networks and level of organisation). For example, evidence was reported which suggested that the severity of the level of deprivation (e.g. unemployment levels, crime levels) may be an important determinant of levels of community organisation and networks, and apparently related indicators of adjustment, suggesting that in the most disadvantaged neighbourhoods social capital may be much less attainable and the protective influences of community much more negligible than in comparatively less disadvantaged neighbourhoods (Edari & McManus 1998; Murry et al. 2001; Roosa et al. 2003; Yoshikawa & Seidman 2000).

Evidence on the important role of formal supports and structure in disadvantaged neighbourhoods was also provided in 4 reviews; firstly with regard to the important

role played by human services e.g. health care, schools, recreation facilities, job training (Edari & McManus 1998; Murry et al. 2001; Wang et al. 1999), and secondly the importance of opportunities for children and adults to participate in the community (Edari & McManus 1998; Stewart et al. 1997; Wang et al. 1999). The value of participation is also suggested in the above mentioned evidence on community empowerment (Villenas & Dehyle 1999).

The only systematic review used here (3-, C) presents some evidence which suggests that material factors may account for some of the differences that exist between disadvantaged African-American single mother families. The review cites findings which suggest that in the more impoverished areas people have less access to community networks and social capital. It also cites evidence on the important role played by local services in disadvantaged neighbourhoods. (Murry et al. 2001, 3-, C).

Evidence statement 13

There is evidence from 4 reviews that the structural characteristics of disadvantaged neighbourhoods moderate the relationship between disadvantage and community characteristics such as social networks and the level of community organisation (Murry et al, 2001, 3-,C; Edari & McManus 1998; Roosa et al. 2003; Yoshikawa & Seidman 2000).

There is evidence from 4 reviews of the important role played by human services and institutions which afford opportunities for participation (Murry et al, 2001, 3-,C; Edari & McManus 1998; Stewart et al. 1997; Wang et al. 1999).

Schools

Evidence on the role of schools in fostering educational resilience, student achievement, attendance and persistence, 'resilient functioning' and reduced substance use and problem behaviours was variously provided in 13 reviews. Of these, 4 reviews simply cited evidence on the significance of positive school experiences (Stewart et al. 1997), school bonding/ attachment (Maddox & Prinz 2003; Meschke & Patterson 2003) and school support (Lynch 2003). In another review it was reported that resilient students perceive more positive learning environments and are more satisfied with their classrooms than non-resilient students (Waxman et al. 2003). A UK based study of 'effective schools' in inner city London was cited in another review, which, controlling for students backgrounds and characteristics, apparently found striking differences in outcomes among schools that varied in 'ethos' or climate (Nettle & Pleck 1996).

Summary point 57

There is evidence from 6 reviews that school factors can be protective against the effects of disadvantage (Lynch 2003; Maddox & Prinz 2003; Meschke & Patterson 2003; Nettle & Pleck 1996; Stewart et al. 1997; Waxman et al. 2003)

Evidence was also provided on features and characteristics of schools which promote resilience among students from disadvantaged backgrounds. These features were commonly grouped into classroom practices and school climate.

Classroom Practices

In 2 separate reviews by the same author, results of a previous meta-analysis were discussed and the following classroom practices were identified as significant; teacher actions and expectations (e.g. high expectations, role modelling, positive relationships with students), effective instructional methods (setting high expectations, opportunities for student engagement/ interaction with teacher, individually tailored instruction for each student, participation in group learning activities) and the curriculum, which although shown to be less important than classroom practice, was still important in providing all students with the opportunity to learn advanced subject matter (as opposed to use of remedial programs) (Wang et al. 1997, 1999). The importance of high teacher expectations and encouragement was highlighted in 2 further reviews (Taylor & Wang 2000; Werner 2000), with one review also reporting evidence that teacher expectancy effects are significantly stronger for African American than for European adolescents (Taylor & Wang 2000).

Summary point 58

There is evidence from 4 reviews that classroom practices can promote educational resilience (Taylor & Wang 2000; Wang et al. 1997, 1999; Werner 2000). High teacher expectations and opportunities for learner engagement and participation were identified as particularly important.

School climate

The results of the meta-analysis reported the protective benefits that are brought by a school culture which reinforces accomplishments, which emphasises involvement, belonging and student engagement in school life, and which promotes positive social interactions among peers and with adults (Wang et al. 1997, 1999). These conclusions were similarly reinforced in 3 further reviews which highlighted the positive effects of increased student participation and influence in school life (Meschke & Patterson 2003; Stewart et al. 1997), and supportive student-teacher relationships (Stewart et al. 1997; Wandersman & Nation 1998).

Summary point 59

There is evidence from 5 reviews that the school environment can promote educational resilience (Meschke & Patterson 2003; Stewart et al. 1997; Wandersman & Nation 1998; Wang et al. 1997, 1999) Opportunities for student participation in school life and positive social interactions among peers and with teachers were identified as particularly important.

Religion

Another protective factor commonly identified in the literature is religion, including 3 review articles focused solely on the relationship between religion and health. Although religious beliefs were cited as individual level factors in the earlier section, it is necessary to mention religion here on its own for the simple reason that it may be influential at the individual, family or community level, and through a number of possible pathways (e.g. social relationships, norms and practices, life orientations) (Ellison & Levin 1998; George et al. 2002).

Evidence of a positive relationship between religious involvement or religiosity and positive outcomes was provided in 7 reviews (Ellison & Levin 1998; George et al. 2002; Gonzales & Kim 1997; Levin & Chatters 1998; Nettle & Pleck 1996; Samaan 2000; Wallace 1999). Specified outcomes included health (Ellison & Levin 1998; George et al. 2002), mental health (Levin & Chatters 1998; Samaan 2000), reduced substance use (Wallace 1999), competence and educational attainment (Nettle & Pleck 1996). Overall the studies cut across different ethnic groups, although a bias towards Christian groups was reported in one review (George et al. 2002) and seems likely in the others given the ethnic composition of the groups under consideration (e.g. Hispanic, African-American, White). One of these reviews was a systematic review (3 -, C). This review explored studies which looked at the influences of race, ethnicity and poverty on the mental health of children in the US. Study findings demonstrated protective factors against mental illness in ethnic groups who were same SES groups as their white counterparts, leading the author to suggest that the increased religious attendance of minority ethnic children may buffer against psychological distress (Samaan 2000, 3-,C).

There was also a limited amount of evidence reported on the mediators of religious effects and health. Factors identified in one review included; health practices are partial mediators; there is no evidence on social support as a mediator (although there is evidence of social support as an independent predictor); no evidence on psychosocial resources as a mediator, and a likely role for Sense of Coherence, although this was only explored in one study. However, the author also commented explicitly on the lack of evidence on mechanisms and commented on the limitations of these findings (George et al. 2002). In the review of longitudinal studies it was also commented that many families of resilient children held religious beliefs that provided stability and meaning to lives, and appear to have provided resilient children with a sense of rootedness and coherence, although the evidence base for these described mechanisms was not made clear. (Werner 2000).

Evidence statement 14

There is evidence from 7 reviews that religious involvement or religiosity contributes to a range of positive outcomes; (Samaan 2000, 3-, C; Ellison & Levin 1998; George et al. 2002; Gonzales & Kim 1997; Levin & Chatters 1998; Nettle & Pleck 1996; ; Wallace 1999).

There is limited evidence from 1 review that health practices may partially mediate the effects of religious involvement, and from 2 reviews that a Sense of Coherence may act as a mediator. (George et al. 2002; Werner 2000)

Q4B: What evidence is there on the processes and mechanisms underlying adaptation and coping?

The above section has highlighted evidence on protective factors which are associated with resilient functioning and which are theorised as providing individuals with resources that enable successful coping and adaptation. The other main evidence base that this review sought to explore was on the processes of person-environment interaction. As highlighted in the Section One literature these processes are thought to

be integral to coping and adaptation, although in the resilience field, at least, they have been relatively under researched. The examination of this area should provide useful evidence on the cognitive and psychological processes involved in negotiating coping responses and ideally a more contextualised understanding of the coping and adaptations of people from disadvantaged groups.

For this section empirical reviews were used which provide evidence on processes of person-environment interaction leading to adaptive psychological and behavioural responses. Only 7 relevant reviews were identified which answer this question, including 1 Systematic Review. These fell into two categories of reviews, which can be distinguished by the extent to which coping or adaptation is explored in the context of structural disadvantage.

Coping Process

The first ‘type’ of review provides evidence on aspects of the coping process, as drawn from more ‘traditional’ coping studies. One of these reviews cited evidence on the context dependency of coping responses and more specifically highlighted how appraisals of controllability influence coping responses. Some of the studies in this review also controlled for SES and other demographic characteristics (Pincus & Friedman 2004). The other review similarly cited evidence suggesting the significance of the appraisal process and reported findings which suggest that perceptions of controllability were linked to active coping methods and that negative appraisals lead to negative psychological adjustment. None of these studies were suggested to have controlled for SES (Roesch et al. 2002).

Summary point 60

There is evidence from 2 reviews that coping responses are context dependent and more specifically are influenced by appraisals of controllability (Pincus & Friedman 2004; Roesch et al. 2002)

Coping in context

Neither of the above reviews is focused on coping in the context of structural adversity. In contrast, the second type of review included in this section provides a much richer source of information on the coping or adaptation of particular disadvantaged groups. Drawing mostly on qualitative studies, including some ethnographic work, these 5 reviews provide evidence on the contexts and processes leading to particular adaptive responses.

One of these reviews was a systematic review of qualitative research on ‘resilient, young mothers’ in the UK (3-, A). Drawing on the findings of 20 studies this review provides an elaborate account of the processes of identity construction and adaptation of young working class mothers seeking to make the best out of their poor socio-economic circumstances and their ‘positioning as outside the boundaries of acceptable motherhood’. The synthesis highlights the difficulties that young mothers experience in constructing a positive identity due to their positioning as ‘unsuitable mothers’, but also how they resist their positioning as an unfit mother by investing in the ‘good’ mother identity. It is suggested that the young mothers’ ‘resistance, refutations and subversion of teenage motherhood discourses can be seen as a form of identity work in which young women in disadvantaged circumstances make use of the discursive

resources available to them’ to make their lives, and their children’s lives, happy and meaningful (McDermott & Graham 2005: 72,76).

Similar findings are also reported in other reviews with regard to the identity construction of minority groups. Three reviews cited the ethnographic findings of Ogbu (1986), that African-American students experiencing feelings of alienation and isolation from social and economic mainstream often reject academic achievement as it is seen as irrelevant to success within their own community and has come to be seen as ‘acting white’(Gonzales & Kim 1997; Nettle & Pleck 1996; Taylor & Wang 2000). In another study it was similarly observed that the more that adolescents perceive that their resources are scarce and their options limited, the more likely they are to make risky decisions with long term negative consequences, or embrace a ‘subculture of disengagement from wider society’ (Taylor & Wang 2000). It is suggested that these apparent responses of separation, mistrust or active defiance of mainstream culture may be ‘adaptive’ in so far as they may help protect a sense of self in a context of damaging ethnic stereotypes (Gonzales & Kim 1997).

Similarly, in a review of ethnographic research on the resilience of Latino families, it is described how communities, families and individuals resist castification by claiming their culture and language and creating ‘counter-hegemonic narratives of dignity and ethnic pride which translate into a base that promotes social, cultural and economic activities whereby immigrant children and adults are able to survive the psychological and often physical violence of an anti-immigrant xenophobic nation.’ This review also highlights that rather than simply not caring about education (a dominant view), Latino families have different meanings that are attached to the idea of education. The author explains; the ‘goal of Latino educational success is linked to goals of self-determination, linguistic and cultural human rights, and the right to a history and education based on community-identified terms.’ (Villenas & Deyhle 1999: 437, 441).

In focusing on processes of adaptation by people in particular contexts and settings these reviews have therefore highlighted how apparently maladaptive behaviours may serve adaptive purposes when they are located in their wider contexts and circumstances, for example, maintaining self esteem, sense of self worth or pursuing alternative community interests and goals. As has already been highlighted in Section One, this kind of evidence is important as it suggests the usefulness of exploring context and meaning when seeking to understand ‘successful’ and ‘unsuccessful’ adaptations. Likewise, it highlights the problems inherent in defining resilience by normative white middle-class criteria.

Evidence statement 15

There is evidence from 5 reviews that adaptation occurs through complex processes of person-environment interaction and that apparently maladaptive behaviours may serve adaptive purposes when they are located in their wider contexts. This suggests the importance of considering context and meaning when seeking to understand ‘successful’ and ‘unsuccessful’ adaptations (McDermott & Graham 2005, 3-,A; Gonzales & Kim 1997; Nettle & Pleck 1996; Taylor & Wang 2000; Villenas & Deyhle 1999).

Implications for research

Protective processes/ mechanisms

A strong criticism and issue in the Section One literature was the need to move away from simply listing variables associated with resilience, to explore the underlying mechanisms of protection. These calls were similarly re-iterated in 8 of the evidence papers used for this section (Ellison & Levin 1998; Fratiglioni et al. 2004; George et al. 2002; Gorman-Smith & Tolan 2003; Roosa et al. 2003; Werner 2000; Wolkow & Ferguson 2001; Yoshikawa & Seidman 2000). Whilst the remaining 6 of these reviews were calling generally for more research into the generation of protective mechanisms and the pathways through which they take effect, two of these reviews were focused on religion (Ellison & Levin 1998; George et al. 2002) and a third called specifically for research into how social networks might act through psychological pathways (Fratiglioni et al. 2004).

Summary point 61

There were recommendations from 8 reviews that future research should explore the underlying mechanisms of protection (Ellison & Levin 1998; Fratiglioni et al. 2004; George et al. 2002; Gorman-Smith & Tolan 2003; Roosa et al. 2003; Werner 2000; Wolkow & Ferguson 2001; Yoshikawa & Seidman 2000);

Contexts

The need for greater attention to the specific social and cultural contexts in which coping and adaptation occurs was emphasised in 10 reviews, with one review making the important point that without adequate consideration of these contexts, the adaptive function of apparently maladaptive behaviours may be missed (Taylor & Wang 2000). These comments included calls for increased attention to the influences of contexts and circumstances associated with poverty and racism (Gonzales & Kim 1997; Hastings et al. 2005; Lynch 2003; Murry et al. 2001; Szalacha et al. 2003; Taylor and Wang 2000) attention to the cultural contexts for behaviour (Gonzales & Kim 1997; Szalacha et al. 2003; Taylor et al. 2002; Taylor & Wang 2000), with particular reference to peer contexts (Meschke & Patterson 2003; Nettle & Pleck 1996), and to the family contexts and circumstances under which parenting practices are strengthened (Coleman & Karraker 1998; Murry et al. 2001).

Evidence statement 16

There were recommendations from 10 reviews that future research should pay greater attention to the social and cultural contexts in which coping and adaptation occurs (Murry et al, 2001, 3-,C; Coleman & Karraker 1998; Gonzales & Kim 1997; Hastings et al. 2005; Lynch 2003; Meschke & Patterson 2003; Nettle & Pleck 1996; Szalacha et al. 2003; Taylor et al. 2002; Taylor & Wang 2000).

Transactional processes

In addition to calls for greater attention to the contexts which influence behaviour, there were also calls in 2 reviews for more process oriented work to explore interactions between person and context, in particular how families negotiate the positive and negative aspects of their environment (Taylor & Wang 2000) and to further explore the links between risk and functioning (Taylor et al. 2002).

Summary point 62

There were recommendations from 2 reviews for research exploring processes of person-environment interaction (Taylor et al. 2002; Taylor & Wang 2000)

*Specific areas of research**Ethnic minorities*

In 9 reviews calls were made for increased attention to the sampling of minority ethnic and religious groups (George et al. 2002; Gonzales & Kim 1997; McDermott & Graham 2005; Roesch et al. 2002; Szalacha et al. 2003; Szanton et al. 2005; Taylor & Wang 2000; Wallace 1999; Werner 2000). In addition to the recommendation above for increased attention to the influences of poverty and racism, other recommendations included; research into race/ ethnicity as protective factor (Szalacha et al. 2003; Wallace 1999), developing cross cultural perspectives/ comparisons (McDermott & Graham 2005; Werner 2000), exploring the relatively unknown territory of the coping strategies of under 18 minority ethnic groups (Gonzales & Kim 1997) and attention to non-Christian groups in research on religion (George et al. 2002).

Other

Other specific areas which were highlighted as areas for further research included; research into support networks and neighbourhood resources (Demo & Cox 2000), research into the contributions of positive and negative qualities of close relationships and the meaningfulness of these relationships (Sarason et al. 1997), and research into the role of schools in fostering/ undermining resilience (Villenas & Deyhle 1999).

There were also calls for empirical evaluations of unevaluated coping programs (Gonzales & Kim 1997; Hastings et al. 2005), resilience programs (Stewart et al. 1997; Wang et al. 1997) and social support interventions (Berkman 1995).

Evidence statement 17

9 reviews recommended increased attention to minority ethnic and religious groups in research (McDermott & Graham 2005, 3-,C; Szanton et al 2005, 3-,C; George et al. 2002; Gonzales & Kim 1997; Roesch et al. 2002; Szalacha et al. 2003; Taylor & Wang 2000; Wallace 1999; Werner 2000).

Other recommendations included; research into support networks and neighbourhood resources, research into relationships, research into the role of schools and empirical evaluations of interventions (Demo & Cox, 3-,C; Berkman 1995; Gonzales & Kim 1997; Hastings et al. 2005; Sarason et al. 1997; Stewart et al. 1997; Villenas & Deyhle 1999; Wang et al. 1997) .

Methods and measures

Following on from calls for research to explore the processes/ mechanisms of resilience and adaptation there were various recommendations for the use of alternative methods. These included idiographic approaches (Yoshikawa & Seidman 2000), mixed method, ethnographic research (Waxman et al. 2003), longitudinal studies (Stewart et al. 1997), case studies of demonstrably resilient children (Wang et al. 1999), and qualitative research to clarify ways in which religion is involved in shaping various health outcomes (Ellison & Levin 1998).

In keeping with conceptualisations of resilience as multidimensional and context specific there were several recommendations for multivariate studies which evaluate multiple outcomes (Gorman-Smith & Tolan 2003; Wang et al. 1999; Yoshikawa & Seidman 2000), in particular positive outcomes and health related outcomes (Maddox & Prinz 2003; Stewart et al. 1997) and which consider multiple contexts and likely moderators. In particular there were calls for analysis which better accounts for gender, SES and ethnicity (Nettle & Pleck 1996; Szanton et al. 2005; Taylor & Wang 2000; Wallace 1999). Specific recommendations here included incorporating neighbourhood level data and individual data for SES indicators (Szanton et al. 2005), more accounting for SES in research on racial/ ethnic disparities (Wallace 1999), and research on the ways in which coping strategies are affected by or reflect SES (Taylor & Wang 2000). For research into the religion-health relationship the use of measures of long term participation were recommended (George et al. 2002).

Evidence statement 18

There were recommendations in 5 reviews for the use of idiographic approaches, mixed method ethnographic research, longitudinal studies and qualitative research (Ellison & Levin 1998; Stewart et al. 1997; Wang et al. 1999; Waxman et al. 2003; Yoshikawa & Seidman 2000)

There were recommendations in 9 reviews for multivariate studies which evaluate multiple outcomes, contexts and moderators, and in particular for studies which account for gender, SES and ethnicity. (Szanton et al. 2005, 3-, C; Gorman-Smith & Tolan 2003; Maddox & Prinz 2003; Nettle & Pleck 1996; Stewart et al. 1997; Taylor & Wang 2000; Wallace 1999; Wang et al. 1999; Yoshikawa, 2000).

Implications for practice

Most of the reviews used in this section made recommendations for interventions, programs or approaches. Some of these recommendations were targeted at school approaches, whilst others were focused on community settings.

School approaches/ interventions

In 5 reviews recommendations were made for more inclusive school approaches, including; learner centred models of classroom instruction and high expectations (Kitano & Lewis 2005; Waxman et al. 2003), greater accommodation of the diverse experiences and perspectives of students (Villenas & Deyhle 1999), and increased opportunities for student, family and community participation and engagement/ partnerships with the school (Maddox & Prinz 2003; Wang et al. 1997)

In one review there was a recommendation for programs which include problem solving and emotion focused coping skills components (Pincus & Friedman 2004). Another review suggested that resilience could be fostered through a focus on psycho-social components of knowledge, management skills and personal meaning (Nettle & Pleck 1996).

Summary point 63

There were recommendations in 5 reviews for more inclusive school approaches

(Kitano & Lewis 2005; Maddox & Prinz 2003; Villenas & Deyhle 1999; Wang et al. 1997; Waxman et al. 2003)

There were recommendations in 2 reviews for skill related programs (Nettle & Pleck 1996; Pincus & Friedman 2004)

Community setting interventions

Social support interventions:

6 reviews recommended interventions which build social supports and networks in disadvantaged communities (Berkman 1995; Gorman-Smith & Tolan 2003; Southwick et al. 2005; Taylor et al. 2002; Wandersman & Nation 1998; Wolkow & Ferguson 2001). Two of these reviews described a need to build on existing strengths in communities, by making use of culturally indigenous structures and patterns of relations (Berkman 1995; Taylor et al. 2002).

Family level interventions

Five reviews recommended family focused interventions (Berkman 1995; Coleman & Karraker 1998; Gorman-Smith & Tolan 2003; Stewart et al. 1997; Taylor et al. 2002), which can develop family strengths (Berkman 1995) and which take into account links between neighbourhood characteristics, family environment, social networks and adjustments (Taylor et al. 2002). There were also more specific recommendations for programs which enhance parental self efficacy (Coleman & Karraker 1998) and which develop social competency and skills through focusing on the child's environment (Stewart et al. 1997).

Summary point 64

There were recommendations in 6 reviews for interventions which build social support and social networks (Berkman 1995; Gorman-Smith & Tolan 2003; Southwick et al. 2005; Taylor et al. 2002; Wandersman and Nation 1998; Wolkow & Ferguson 2001)

There were recommendations in 5 reviews for family focused interventions. (Berkman 1995; Coleman & Karraker 1998; Gorman-Smith & Tolan 2003; Stewart et al. 1997; Taylor et al. 2002)

Implications for policy.

In line with comments made in Section One, one review (Taylor et al, 2002) calls for policy level attention to be given to macro-structural influences such as unemployment, discrimination. It warns against a focus on micro-level influences alone - for example, social support - which may be limited in the extent to which they can mitigate the effects of poverty (Taylor et al. 2002).

Summary point 65

It is recommended in 1 review that greater political attention should be given to addressing macro-structural influences such as unemployment and poverty (Taylor et al. 2002).

Q5. What evidence is there on the effectiveness of interventions engaged in generating contexts and resources which might facilitate coping/ resilience/ or other positive developmental outcomes among disadvantaged groups?

Only 6 reviews met our inclusion criteria for this section. Although other reviews of relevant interventions had been retrieved by the search and used elsewhere in this report, here we used only systematic reviews or meta-analyses which met the four minimum criteria to address the research question. A further cause of exclusion for otherwise relevant systematic reviews was that many did not provide information on the backgrounds and characteristics of study participants, meaning that it would not be possible to draw conclusions on whether these interventions or programs are effective for disadvantaged groups.

One of the reviews was scored as ++, three reviews scored as +, and two scored as -. Four of the reviews reviewed evidence from randomised controlled trials or ‘quasi-experimental’ studies, and one was a systematic review of systematic reviews. The best available pieces of evidence retrieved for the other remaining review were descriptive case studies of schools with ‘good practice’, with the result that no conclusions on effectiveness could be drawn. This review will therefore only be used to highlight gaps and implications. With the exception of this last review all of the other reviews relied heavily on evidence from studies carried out in the US and were graded as C.

The reviews differed quite considerably in terms of the aims and objectives of the interventions, the components of the interventions and the outcomes used to assess effectiveness. What they shared in common was some kind of focus on one or more of the protective resources identified in Question Four, for example, developing coping skills or strengthening relationships and social support. They also obviously provided evidence on the effectiveness of the interventions for disadvantaged groups.

Skills training; children and young people

3 reviews evaluated the effect of interventions with skills components on a range of outcomes.

One meta-analysis (1&2 ++, C) reviewed 10 evaluations of interventions that targeted social exclusion to prevent unintended teenage pregnancy (Harden et al. 2006). Two categories of interventions were reviewed: early childhood interventions (pre-school and primary school) and youth development programmes (11-18). Both types of interventions had components aimed at enhancing cognitive and social skills. The studies reviewed all had control or comparison groups and the outcomes used to measure effectiveness included pregnancy rates, academic achievement, employment, attitudes to school. The review found that early childhood interventions and youth development programmes which promote healthy relationships and engagement with learning and ambition, through cognitive and social skills components, can lower teenage pregnancy rates by 39 per cent. Although effects for young men were not statistically significant, they were also reported to occur in the same positive direction.

These findings are reported to contrast with those from a recent systematic review of more traditional strategies e.g. sex education and contraceptive services. The author comments on some limitations to the review caused by a reliance on studies from the US and the often poor descriptions of the components of interventions. A need is highlighted for UK based RCTs with integral process evaluations which describe the content, setting and length of interventions as well as the characteristics of the young people studied. Economic evaluations examining costs and benefit were also recommended, with costs apparently having been inconsistently reported in trials in the review. The author concludes that interventions which promote academic and social skills should complement, rather than replace, high quality sex education and contraceptive services, and should be accompanied by evaluation of their impact. There should also implementation of wider measures to tackle social disadvantage and poverty as a route to lowering teenage pregnancy rates.

Another review (1&2-, C) evaluated the effects of 3 child focused coping skills interventions which had been explicitly designed or modified to be used with specific ethnic groups, or were evaluated with a predominantly minority ethnic sample (Gonzales and Kim 1997). The studies used all had control comparison groups and the outcomes used to measure effectiveness included college attendance, behaviour problems, teenage pregnancy and social competence measures. This review found firstly that few coping interventions have targeted mental health or general well-being for minority children. Secondly, of those that have, program effects have only been demonstrated for at most one year follow up and demonstrated gains have been modest (no figures provided). However, the author concludes that the results do lend some support for the use of coping interventions.

Another review (1& 2 +, C) systematically evaluated existing systematic reviews on drug use prevention among young people (McGrath et al. 2006). Only 2 out of the 7 reviews described the social backgrounds of participants. Both of these reviews considered 'skills' programs. One of these reviews explored the characteristics of effective school-based substance abuse prevention, including cognitive behaviour programs. The other review considered drug prevention strategies for minority (Native American) youth. The program components in individual approaches involved skills training and 'bicultural competence' interventions which taught adolescents coping skills for negotiating between mainstream and native cultures to increase a sense of self-efficacy in both cultures.

This review of reviews concluded that good evidence is reported for the effectiveness of programmes based on social influences approaches, and some evidence is reported to support the efficacy of life-skills training. However, social background characteristics were not provided for most of the reviews used as evidence here. For the 2 reviews which reported background characteristics some positive findings were provided: In the review of the characteristics of effective school-based substance abuse prevention programs, it was reported that cognitive behaviour programmes offer the greater chance of success for at risk populations. However, it was also reported that the number of included prevention programmes for at-risk populations is small and therefore the strength of evidence weak. In the review of strategies for Native American youth it was reported that incorporating bicultural competence approaches to skills training has been shown to be effective for reducing prevalence of drug use in Native American youth. The author of the review of reviews

subsequently suggests that adding bicultural approaches to skills training for some populations of minority youth in the UK may be useful, as this should increase the cultural sensitivity of the programme and should make the programme more meaningful for participants.

Overall, though, the author comments that a lack of methodologically sound evidence means it is difficult to conclude 'what works' in drug prevention among young people. Also the lack of convincing evidence for the components of effective drug prevention programmes may mean that the efficacy of those components or features depends on other characteristics of the programmes and the types of populations and settings. The author comments on the lack of methodologically sound studies and the heterogeneity that exists in the methods and measures used by evaluation studies, which makes it difficult to compare the relative effectiveness of different programmes. The author suggests a need for the standardisation of research methodology in drug prevention research and suggests that it would be useful if future multi-component programmes have a research element that can examine the relative effectiveness of different components or interventions within a multi-component programme. The need to consider the effectiveness of interventions in relation to particular populations was also highlighted.

Evidence statement 19

There is some evidence from 3 reviews (1&2 ++, C; 1&2 ++, C; 1&2-, C) that programs which build social and cognitive skills can enhance positive outcomes.

Outcomes used to measure effectiveness included; pregnancy rates, academic achievement, employment, attitudes to school (Harden et al. 2006), (1&2 ++, C) college attendance, behaviour problems, teenage pregnancy and social competence measures (Gonzales and Kim 1997), (1&2-,C) and reduced prevalence of drug use (McGrath et al. 2006), (1& 2 +, C).

However, two of these reviews also suggested weaknesses or limitations with some of the evidence used (Gonzales and Kim 1997), (1&2-,C); (McGrath et al. 2006), (1& 2 +, C).

Mentoring: role modelling and relationships

One meta-analysis (1&2-, C) reviewed 59 mentoring programs (DuBois et al. 2002). The programs involved 1-1 mentoring by an older adult on populations under the age of 19. The studies reviewed all had controlled or pre-program/ post-program designs and the outcomes used to measure effectiveness included emotional/ psychological measures, measures of problem-high risk behaviour, and social competence, academic and career related measures. The results of the meta-analysis provide support for the effectiveness of youth mentoring programs. Relatively small effect sizes (.14 and .18) were reported, although there was considerable heterogeneity in effect sizes. The 95% confidence interval for both fixed and random effects encompassed a lower value of .05 and an upper value of .24. The strongest predictors were training for mentors, structured activities and expectations for frequency of contact. Mentoring programs were shown to offer the greatest potential for youth most at risk.

The author recommends further research into the relationship quality and circumstances where successful mentoring occurs. For policy and practice he recommends the continued implementation of mentoring programs established for youths from disadvantaged backgrounds, but in innovative ways and making use of experienced and successful mentors.

Evidence statement 20

There is evidence from 1 review (1&2-, C) that mentoring programs can impact positively on emotional/ psychological measures, measures of problem-high risk behaviour, and social competence, academic and career related measures. However, the overall effect size was small but variable between studies.(DuBois et al. 2002), 1&2-,C)

Family Focused Interventions

Parenting skills and bonding

One review (1&2-, C) evaluated the effects of 5 family based interventions which had been explicitly designed or modified to be used with specific ethnic groups, or were evaluated with a predominantly minority ethnic sample (Gonzales and Kim 1997). Key program components included parenting skills and bonding. The studies used all had control comparison groups and the outcomes used to measure effectiveness included college attendance, behaviour problems, teenage pregnancy and social competence measures. Positive effects were reported on outcomes. The strongest evidence of effectiveness was provided by three early intervention parenting programs that have targeted low-income mothers of infants in high-risk settings. Impressive effects demonstrated into childhood and early adulthood. These programs involved 2 year intensive efforts. Shorter duration programs demonstrated more modest effects and are reported to require continued follow up. The author recommends that future evaluations should include larger and more varied samples and randomized designs, which were not used in some cases.

Support for at risk families

In this meta-analysis (1&2 +, C) 56 programs designed to promote family wellness and prevent child maltreatment were reviewed (MacLeod and Nelson 2000). Two types of programs were identified: pro-active 'wellness' interventions and re-active interventions responding to cases of child maltreatment, although only the 'wellness' interventions are considered relevant to this review. This is due to their preventative orientation and their focus on strengthening the resources and capacities of 'at-risk' families. Both types of interventions were split according to their components, which the reviewer categorised as; home-visiting, multi-component (family support, pre-school education, child-care and community development) and social support/ mutual aid programs. The studies reviewed all had prospective controlled designs and the outcomes used to measure effectiveness included: out of home placement rates, direct/proxy measures of maltreatment, measures of parent attitudes, observations of parent behaviour and measures of the home environment. A total mean weighted effect size of .41 was reported for both types of interventions, meaning that outcomes for the intervention group exceed 66% of those in control/ comparison groups. The highest effect sizes were observed for Intensive Family Preservation (reactive) programs with high levels of participant involvement, an empowerment/ strengths-based approach,

and a component of social support. The second highest effect sizes were observed for multi-component (proactive) 'ecological' interventions, suggesting the value of such approaches for the healthy development of at-risk families in general.

The author recommends further research into the protective influences generated through proactive interventions, including which influences are the most effective, as well as increased use of follow up assessments and the examination of more general outcomes of family wellness. For policy makers and practitioners the author recommends a greater emphasis on pro-active rather than re-active interventions, as well as policies which work towards the reduction of poverty, as a priority.

Evidence statement 21

There is evidence from 2 reviews (1&2-, C; 1&2+, C) that family focused interventions aimed at building family strengths and resources can be effective in enhancing 'family wellness' and can impact positively on college attendance, behaviour problems, teenage pregnancy and social competence measures (Gonzales and Kim 1997), (1&2-, C); (MacLeod and Nelson 2000), (1&2+, C)

Inclusive school environments

(Dysson et al. 2002) (3+, A) considered 27 studies which were concerned with school level responses to diversity and increasing the participation of all students in the culture, curricula and communities of their schools. In spite of a rigorous search strategy no outcome evaluations studies were found and only case studies describing exemplary school approaches could be used. Due to the fact that no outcome evaluations were identified which could produce data on effectiveness, the significance of this systematic review lies in the gaps which it identifies. The author therefore highlights an urgent need for methodologically sound studies which test the extent of the schools inclusivity, which draw on a wide range of evidence, which focus on outcomes for students, which trace links between action and participation in detail, and make comparisons between more-and less-inclusive schools.

Evidence statement 22

1 review (3+, A) found no outcome evaluations which could produce data on the effectiveness of inclusive school approaches in the UK (Dysson et al. 2002), (3+, A).

4.0 CONCLUSION: GAPS AND IMPLICATIONS

Theory and knowledge

This review is novel in that it considers theoretical approaches as well as highlighting interventions that have been informed by theories of resilience, coping and salutogenesis. This starting point is important for the development of theoretically informed public health interventions, to provide information about why and how change occurs as well as by evidence of ‘what works’.

In spite of the acknowledged variability in approaches to defining and researching resilience and coping, and to a lesser extent, salutogenesis, these three areas of theory and research contribute to a knowledge base on how and why some people are able to achieve a level of functioning better than would be expected given the unfavourable circumstances in which they live. All three literatures propose resources and contexts which facilitate coping and adjustment, or adaptation, to adversity. Although the quality of the evidence base is considered weak in terms of traditional review methods, and there are some issues that need to be addressed in terms of how positive adaptation or outcomes are defined and operationalised, there was considerable consistency in findings with regard to identifying factors associated with positive outcomes. This evidence suggests individual, family, community and institutional factors all play a role in buffering some of the effects of disadvantage and facilitating ‘healthy’ adaptation.

The literatures on salutogenesis and ‘Sense of Coherence’, and to a lesser extent coping, also provide theoretical frameworks which can guide an understanding of the individual life choices, pathways and ‘life orientations’ (Antonovsky, 1979). There was also a small body of empirical evidence which was illustrative of these theorised processes of adaptation. This evidence suggests that adaptation occurs through complex and continuous processes of person-environment interaction, which in turn suggests the importance of considering context and meaning when seeking to understand and explain ‘successful’ and ‘unsuccessful’ adaptations. Whereas salutogenic models, based on the theory that people’s sense of coherence explains why some people are healthy in the face of adversity, are well placed to take structural influences into account, an apparent weakness in the traditional resilience literature has been its lack of attention to process and the social and cultural contexts in which disadvantaged individuals and groups live. The knowledge base on resilience and adaptation could therefore be strengthened by theoretical models which have greater space for consideration of the contextual and structural influences shaping adaptive responses, with increased opportunities for identifying and targeting alterable risk and protective factors.

Gaps in existing research

This review has highlighted several gaps in research in this area. Firstly, very few systematic reviews were identified in the searches which were relevant to our topic area, and those systematic reviews that were identified tended only to look at a specific area (e.g. the relationship between social support and health). This seems likely due to the fact that systematic reviews have traditionally been the domain of investigations on ‘effectiveness’, and except for Question Five, this was not a review of effectiveness. Systematic reviews are important for reducing bias in the selection of studies and increasing confidence in the quality of evidence. Therefore, a first implication for future research is for a systematic review of the primary level

evidence on the positive adaptation of people despite conditions of social-structural adversity.

Secondly, even when evidence from traditional literature reviews is considered, a lack of empirical evidence on processes and mechanisms underlying protection, resilience and adaptation is evident. This gap was also frequently highlighted in the issues and implications that were discussed in the reviews that we used. For the reasons outlined in the section above (implications for theory), this gap is an important one. A further implication may therefore be for primary studies to investigate processes and mechanisms of adaptation. Recommended methods for this type of research included the use of multivariate and interactive statistical models, idiographic approaches, mixed method ethnographic research, longitudinal studies and qualitative research. However, due to the fact that this was only a review of reviews we cannot be certain that this evidence does not already exist. A systematic review of the evidence on the processes and mechanisms underlying adaptation and coping may therefore be a more appropriate first step. Given the high degree of consistency in research findings on protective factors, this kind of more focused review question may be more useful than the broader review question suggested earlier. In particular this level of focus would enable a more sensitive search strategy to be developed which could identify relevant studies that may not be framed or described in resilience or coping terms.

A third apparent gap in the research base is with respect to reviews and evaluations of resilience promoting interventions. The literature used for Question Three highlighted various resilience enhancing approaches. Many of these reviews also provided outcome data for these interventions but were not systematic reviews and due to the corresponding likelihood of bias they were not used to answer the effectiveness question. One implication then is for a systematic review of primary level evidence on the effectiveness of the kinds of interventions and approaches described in Question Three, as well as other interventions engaged in building protective resources or settings. The findings of the systematic review looking at inclusive education in Britain also highlights a need for more rigorous outcome evaluations of the effectiveness of inclusive school approaches, as the literature on inclusive education seems likely to share common ground with the literature on educational resilience and resilience enhancing schools. Another important recommendation made in the literature with regards to evaluations was the need for comprehensive process evaluations and study designs which can account for the relative influences of different components in interventions and their relative influences on different groups.

A final point which needs making is with regards to the considerable number of reviews that were excluded due either to an absence of information reported in the review on the socio-economic characteristics of study participants, or because the studies which they used did not appear to have controlled for SES. This was true of reviews of interventions and observational studies, and is an issue which needs to be addressed if the evidence base on 'what works' as well as 'what protects' is to be enhanced with respect to socially disadvantaged groups.

Implications for practice

The overall weak level of evidence used in this review means that it is difficult to make recommendations for practice without further research of the type identified above. That said, some good quality evidence was provided on the effectiveness of

'resource' building approaches such as skills training, mentoring programs and programs aimed at building family strengths. Possibly also worthy of consideration are the following recommendations, which were consistent in discussions across the literature and follow logically on from the discussed evidence base on types of protective factors; more inclusive approaches and skill building programs in schools, interventions which build social support and social networks and interventions which build family strengths. The danger in neglecting macro-structural influences in favour of micro-level solutions was also variously highlighted in pieces of literature.

Limitations of this review.

A first limitation of this review is the quality of evidence upon which it is based. Only 6 of the reviews used for Question Four met the minimum four criteria to qualify as 'weak' systematic review, with the remainder of the evidence base relying upon traditional literature reviews (TLR) considered to be 'very weak'. This is problematic due firstly to a likelihood of bias in the selection of studies and secondly because very little information was provided on the characteristics and quality of the studies reviewed. For the 'effectiveness' question only 6 systematic reviews met our inclusion criteria, and although these provided an acceptable standard of evidence, the considerable differences in the objectives and outcomes of the interventions makes it difficult to consider the results collectively.

A second limitation with this review is that the vast majority of evidence used in the reviews was also US based, and although similarities in the structural, social and cultural contexts of the UK and US suggests that the evidence could be applicable to the UK, the differences between the two countries means that this evidence should also be treated with caution.

A third limitation might have occurred through our search strategies. Due to the breadth of the topic area a large number of search terms were used. However, in order to make the scanning process manageable these terms were separated into two sets ('coping/ resilience terms' and 'influences terms'), which were then combined using AND . This means that if reviews did not have at least one term from each set in its title and abstract then they should not have been identified in the search. This may have limited the number of potentially relevant reviews, in particular with regard to the coping and intervention literatures, which maybe less likely to have 'influences' terms included in the abstracts. Likewise, potentially relevant reviews may have been missed out if they considered evidence on protective factors or processes, but did not make reference to resilience, coping or adaptation terms. This may explain why the large body of work on social capital was not tapped into by the search, in spite of social capital being incorporated as an 'influence' term. Time and resources permitting a better option may have been to carry out separate searches for the different areas or alternatively to have narrowed the focus of the review. There were also very few reviews identified on salutogenesis. This is unlikely to be due to the search terms used since 'salutogenesis' was incorporated in sets 1 and 2 to maximise the number of hits. This may be reflective of the status of the theory in contemporary health research, but it may also be due in part to an English Language bias, as the theory would appear to have more currency in Scandinavian countries.

A fourth limitation is that there was not enough time to search the grey literature, follow up references or consult experts working in the field, meaning that more recent

unpublished reviews will not have been considered and other reviews may have been missed. Given the weak evidence base it would also have been beneficial to search for primary studies, but again this was not an option due to the time scale.

Some general limitations of ‘reviews of reviews’ also need to be noted. These limitations have been discussed in detail elsewhere (see Swann et al 2006), but here are some summarising points, as outlined by Jepson et al (2006). Firstly, reviews do not always compare the same thing – some reviews examine outcome data studies, others look at more prospective studies (some consider both) – so interpretation of what is found is complicated by the state of the data pool. Secondly, some of the high quality reviews might contain poor quality evidence, because that is all that is available. Thirdly, some of the reviews might overlap, and include the same studies. Fourthly, even though no reviews have been done in a particular area (e.g. on underlying protective mechanisms and processes), this does not mean that there is not a large body of good primary evidence on that topic. Finally, when looking at the evidence in reviews, we may be limited by the questions that the review authors have decided are important. These may not be the same questions as we think are important (Jepson et al, 2006).

Finally a key limitation which relates to all the comments above is the rigidity of the review process itself in relation to a complex and theoretically challenging domain. The reviewers were surprised that insights from the vast literature on social capital, for instance, was not evident in the data pool, and they were restricted to the literature captured through the research strategies. With regard to the specific theories under review this also meant that we were unable to draw on original theoretical texts. The process was therefore highly dependent on the quality of second-hand views and interpretations of some highly influential theoreticians. The result is a ‘thin’ approach to theoretical texts which overlooks the richness and nuances that the original authors contributed to their academic disciplines. More flexibility is therefore suggested with regard to reviews of theoretical approaches and it is recommended that the process be reconsidered and amended for reviews of this type.

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EVIDENCE TABLES

1. Evidence tables for Question One. What are the different theories and models of resilience, coping and salutogenesis, used in contemporary research?

1.1.

Resilience Studies used in Q1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Blum, R. W. (1998)	TLR	N/A	Discusses approaches to research on resilience and interventions which promote resilience and positive youth development.	In this review key concepts in the resilience literature are described briefly and research approaches to the study of resilience are discussed. The author describes the scope of research in this area and discusses the types of methods used. Various issues with research practices are highlighted and recommendations are made for future research. The review also discusses two types of resilience promoting interventions; Life-Skills training and social development models.	TLR
Condly, S (2006)	TLR	N/A	Reviews some of the literature on children's resilience and identifies implications for education.	This review discusses the variability in definitions and approaches to the study of resilience. The author also makes recommendations for the most appropriate methods for researching resilience.	TLR

Resilience Studies used in Q1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Delfabbro & Harvey (2004)	TLR	N/A	Provides a critical overview of the resilience literature.	This review comments on some of the conceptual difficulties and limitations with research on resilience, with particular regard to the selection of measures. The authors recommend a greater focus on reports and experiences of people who appear to have overcome adversity, and that the definition of resilience should be based upon culturally and socially relevant ratings of success.	TLR
Doll & Lyon (1998)	TLR	N/A	Considers the potential and limitations of resilience interventions in schools.	This review discusses the potential and limitations of resilience interventions. The authors accuse past interventions of educational 'faddism' and make recommendations for how interventions could be improved to eliminate sources of risk and enhance sources of support. On a general note the author also expresses concerns that resilience literature may be used to justify limited expenditure on tackling poverty and stresses a need for policies which target social institutions.	TLR
Fergus & Zimmerman (2005)	TLR	N/A	Reviews some of the literature on resilience to present a framework for understanding healthy development in the face of risk.	This review discusses definitions and key concepts and models in the resilience literature and the authors also raise some concerns and ethical issues with the literature. With regard to research methods and approaches the authors make recommendations for appropriate methods and areas of study. With regard to interventions Life Skills Training is described and discussed as a resilience promoting approach.	TLR

Resilience Studies used in Q1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Garmezy, N. (1993)	TLR	N/A	Discusses some of the literature on resilience with regard to child poverty.	This paper provides a brief overview of the key concepts in the resilience literature with specific reference to children in poverty.	TLR
Glantz & Sloboda (1999)	TLR	N/A	Provides an overview of different approaches to resilience and discusses some issues with the literature and research in this area.	This review discusses the different approaches and definitions used by resilience researchers and the authors make some recommendations for future uses of the concept. With regard to research methods the authors identify issues with research on resilience and make recommendations for future research.	TLR
Hawley & DeHaan (1996)	TLR	N/A	Outlines a model of family resilience.	This review discusses some of the key concepts in the emergent literature on family resilience.	TLR
Johnson J. (1999)	TLR	N/A	Outlines a transactional model of resilience	This author discusses some of the key concepts in the resilience literature and outlines a transactional model of resilience.	TLR
Kaplan, R (1999)	TLR	N/A	Provides a critical review of definitions and models of resilience.	This review discusses some of the different definitions and approaches used by resilience researchers and the author comments specifically on the high variability in definitions and operationalisations of resilience. The authors identify several issues with research on resilience, with particular regard to the selection of outcome variables and the absence of a theoretical and explanatory framework. The author makes several recommendations which could address some of the limitations and improve future research on resilience.	TLR
Lindstrom,	TLR	N/A	Provides a critical	In this article the author highlights some ethical issues	TLR

Resilience Studies used in Q1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
B (2001)			overview of some of the resilience literature	with resilience theory; namely that it is too individualistic in its focus and that it lends itself to 'victim blaming' explanations and a neglect of the structural causes of social problems.	
Luthar et al (2000)	TLR	N/A	Critically evaluates the construct of resilience and outlines guidelines for future work	This review critically discusses some of the key concepts in the resilience literature and makes recommendations for improving the use of resilience concepts. With regard to research on resilience the authors provide some background on research in this area, they identify several issues and limitations with resilience research and make recommendations for how it could be improved in the future.	TLR
Luthar & Cicchetti (2000)	TLR	N/A	Provides overview of resilience literature and identifies implications for interventions and social policies	This review discusses some of the key concepts in the resilience literature. The authors provide some conclusive definitions of their own and identify some ethical issues with the resilience concept. With regard to research approaches this review briefly describes current tendencies and makes recommendations for improving future research. With regard to interventions the authors highlight some general issues and limitations with previous educational interventions and outline a number of guiding principles for future interventions and evaluations.	TLR
Meschke & Patterson (2003)	TLR	N/A	Provides an overview of some of the resilience literature and proposes resilience as a theoretical	This review discusses some of the different definitions and perspectives on resilience and identifies several types of resilience promotion programs that are related to youth substance use, including individual focused, family focused, peer focused and community focused. The authors conclude that developmentally appropriate	TLR

Resilience Studies used in Q1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			basis for substance abuse prevention.	programs that strive to enhance protective mechanisms at the individual, family, peer and/or community levels may help prevent substance use as well as also other risk behaviours.	
Miller, D (1999)	TLR	N/A	Provides an overview of resilience literature with specific reference to African American adolescents	This review discusses different definitions of resilience and some of the key concepts of resilience. It is focused on the resilience literature in relation to African American adolescents and the author specifically suggests that racial identity may serve as a unique protective factor. The author also comments on the neglect of minority groups in research and calls for future research into the role and process of racial socialization/racial identity as a protective factor.	TLR
Olsson et al. (2003)	TLR	N/A	Provides a concept analysis of resilience with reference to adolescents.	This review discusses the different definitions and approaches to the study of resilience. The authors outline and describe some of the critical concepts, highlight some issues with how resilience has been researched and make recommendations for future uses of the construct in research.	TLR
Patterson, J. M. (2002)	TLR	N/A	Provides an overview of the family resilience field.	This review discusses some of the key concepts and applications of the emerging field of family resilience. The author highlights the potential of such a perspective with regards to clinical practice but also stresses that adequate resources must be available in the ecological context to facilitate the development of protective processes within families and to reduce the ecological risks that undermine family functioning.	N/A
Rutter, M. (1993)	TLR	N/A	Discusses conceptual issues with resilience.	This review discusses various conceptual issues with the resilience literature. The author offers definitions and descriptions of several of the key constructs associated with resilience and makes methodological	N/A

Resilience Studies used in Q1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				recommendations for future research.	
Ryff et al (1998)	TLR	N/A	Discusses some of the defining features of resilience with specific reference to adulthood and later life.	This review discusses some of the key concepts in the resilience literature and provides some historical background on research in this area. Specifically it is making the point that the vast majority of research has dealt with early childhood and adolescence and the authors call for more research on resilience with regard to older groups.	N/A
Sandler, I (2001)	TLR	N/A	Discusses mechanisms of risk and resilience from ecological perspective.	In this review the author presents an ecological conceptualisation of resilience. He proposes that an individual has 4 basic needs: safety, control, self worth, belongingness. It is argued that protective resources affect these needs to promote resilience, and that these resources come from multiple levels; individual, microsystem, cultural and community levels. The author identifies some gaps in the research and also makes several recommendations for resilience enhancing interventions.	TLR
Smith and Carlson (1997)	TLR	N/A	Discusses models of coping with specific reference to coping and resilience in children and youth, and identifies coping interventions.	This review suggests a significant growth in studies of resilience and coping and discusses and describes the coping process from a transactional perspective, discusses stressor types and coping resources and discusses theory and research specifically relating to children's coping. With regard to interventions the authors identify four general categories of interventions to promote resilience and coping: enhancing of self-esteem, improving academic achievement, promoting social skills, and strengthening families and social supports. The authors	TLR

Resilience Studies used in Q1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				also identify a relatively un-researched role for community and religious organizations.	
Tusaie and Dyer (2004)	TLR	N/A	Provides a historical review of the construct of resilience and considers how it has been researched.	In this review different definitions and models of resilience are discussed and the key concepts in the resilience literature are described and some issues considered. With regard to research the review describes common approaches used by researchers and the authors also make recommendations for the improvement of future research.	TLR
Ungar, M (2003)	TLR	N/A	Discusses the potential for qualitative contributions to resilience research	In this paper the author builds an argument for the use of qualitative methods in resilience research and identifies several weaknesses with existing research in the area.	TLR
Walsh, F (2002)	TLR	N/A	Outlines a family resilience framework for clinical practice.	In this paper the author provides some historical background on the emergent area of family resilience and outlines some of the key concepts in the literature.	TLR
Wang, et al (1999)	TLR	N/A	Discusses the literature on psychological and educational resilience.	In this review definitions and concepts in the literature on educational resilience are discussed and some defining features of interventions which promoted educational resilience are suggested.	TLR
Windle, M. (1999)	TLR	N/A	Discusses critical conceptual and measurement issues in the study of resilience.	In this review the different definitions and approaches to resilience are critically discussed. The author outlines what he considers to be the key constructs and defining features of resilience and the most appropriate conceptual and methodological approaches to the study of resilience are discussed. The author makes specific recommendations for future research in the area.	TLR
Wolff, S.	TLR	N/A	Provides an	This paper briefly reviews definitions and key concepts in	TLR

Resilience Studies used in Q1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
(1995)			overview of the concept of resilience.	the resilience literature before considering some single case study examples. The author also highlights the significance of macro-structural influences for fostering childhood resilience.	
Yates et al (2003)	TLR	N/A	Outlines a developmental process perspective on resilience.	In this paper the authors outline an organizational developmental model of resilience. From this perspective it is argued that the successful negotiation of early development issues provide a foundation for the process of resilience among disadvantaged youth. Resilience is therefore seen as a dynamic developmental process that enables children to achieve positive adaptation despite prior or concomitant adversity. The authors consequently highlight a need for prevention and intervention programs aimed at developing strong, supportive, responsive and successful early parent-child relationships.	TLR

1.2 Coping studies used in Question One.

Coping studies used in Q. 1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Aspinwall, L. (2004)	TLR	N/A	Reviews the literature on models of coping and self-regulation.	This review discusses the transactional model of coping, methods used to research coping and some limitations with research in this area. These limitations apparently make it difficult to determine what makes an event stressful, what people do to manage the stressor and why and how specific ways of coping are related to later psychosocial and health outcomes. The author recommends the use of idiographic approaches used in self regulation research as an alternative method which is capable of providing a much richer picture of people	TLR

Coping studies used in Q. 1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				managing multiple goals and self conceptions.	
Fields & Prinz (1997)	TLR	N/A	Reviews some of the literature on coping and adjustment during childhood and adolescence	<p>This review discusses the transactional model of coping, different approaches to the study of stress and coping, different models and categorisations of coping responses (eg problem focused/ emotion focused, active/ avoidance coping). On the subject of children's coping the review authors suggest that categorization of stressors by controllability may not be useful and that coping with stress in children may be better studied according to the situational context of the stressor rather than broad band stressor groups (ie daily hassles or major life events).</p> <p>The review authors discuss the state of research in Children's coping and the different approaches and measures used by researchers in the field.</p>	TLR
Frydenberg (2002)	TLR	N/A	Provides a synthesis of the different theoretical models that have been developed in the field of stress and coping and provides a way forward beyond the traditional stress and coping paradigms.	This review discusses the historical background and the development of coping research and describes and synthesises situational and dispositional models of coping.	TLR
Haggerty et	TLR	N/A	Provides a brief	This review discusses the historical background and	TLR

Coping studies used in Q. 1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
al (1996)			overview of the stress, coping and interventions literature	development of coping research. The author recommends that research today should be focusing on processes and mechanisms by which children of different ages deal with adverse life experiences, rather than simply studying the stressors. With regard to interventions the author describes some unifying aspects of coping interventions which are identified as helping youth to become masters of their own fate, problem solving skills, fostering links with social supports and providing comprehensive services.	
Lahey & Cohen (2000)	TLR	N/A	Reviews models to guide research on social support.	The authors present brief overviews of 3 theoretical perspectives on social support research: (1) the stress and coping perspective, (2) the social constructionist perspective, and (3) the relationship perspective. The authors provide a useful account of social support as an external coping resource.	TLR
Moos & Holahan (2003)	TLR	N/A	Provides overview of dispositional and contextual models of coping and outlines an integrative framework.	This review outlines and synthesises different approaches and perspectives on coping (transactional and dispositional) and explains that contemporary theorists generally recognize that the dispositional and contextual approaches have complementary strengths. Also discusses and synthesises types of coping responses (eg cognitive and behavioural) With regard to research approaches the review discusses the use of dispositional and situational measures in coping research.	TLR
Outlaw, F. (1993)	TLR	N/A	Considers stress and coping literature with specific regard to	This paper discusses Lazarus and Folkman's (1984) cognitive-appraisal framework. The authors suggest this model to be an appropriate theoretical perspective from which to examine African American responses to stress	TLR

Coping studies used in Q. 1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			the influence of racism on the cognitive appraisal processing of African Americans	and the influence of racism on the appraisal, stress, and coping of this group. With regard to research the author describes a shortage of research on the coping and experiences of African Americans and suggests that a failure to recognise these experiences is likely related to inadequacies in health care provision for this group.	
Pincus & Friedman, (2004)	TLR	N/A	Discusses coping models and considers implications for interventions.	This review outlines and discusses the cognitive appraisal model of coping, describes the coping process and discusses type and effectiveness of coping responses. With regard to interventions the authors suggest a rationale that coping skills can be taught and describes school based intervention programs which focus primarily on teaching children about the problem solving "process" or about "direct action" types of problem solving strategies. The authors suggest that much less is reported to be known about the effects of teaching children emotion-focused coping skills.	N/A
Rosella & Albrecht, (1993).	TLR	N/A	Discusses the stress-coping framework as a model which can be applied to understandings of the health status of Black adolescents.	This review stresses the importance of consideration of stress-coping processes when evaluating health needs and problems, with particular reference to the needs of black adolescents. A transactional perspective is used to frame the discussion on coping resources. External and internal mediating factors are identified. However, it is also pointed out that very little systematic work or theory building research has been conducted on black youth	TLR

Coping studies used in Q. 1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				living in urban poverty conditions and further research efforts are needed for this group, which could then inform culturally sensitive self report instruments and interventions	
Sandler et al. (1997).	TLR	N/A	Provides overview of different coping models and discusses their potential linkages to interventions.	This review discusses the different models of coping; psychoanalytic, transactional and motivational. With regards to interventions it identifies and discusses 3 distinguishable approaches to interventions to enhance adaptive coping; 1) Building stable coping resources and styles 2) Assisting in coping with the tasks of specific stressful situations 3) Enhancing support. The authors also discuss some issues with coping interventions and evaluations of interventions.	TLR
Skinner & Edge (2002)	TLR	N/A	Provides overview of research into children's coping and emergent body of work on role of parents in children's coping.	This paper discusses the key concepts in motivational perspectives on coping and discusses the application of motivational perspectives to the fields of children's coping and the emerging body of research on the role of parents in children's coping.	TLR
Smith & Carlson (1997)	TLR	N/A	Discusses models of coping with specific reference to coping and resilience in children and youth, and identifies coping interventions.	This review suggests a significant growth in studies of resilience and coping and discusses and describes the coping process from a transactional perspective, discusses stressor types and coping resources and discusses theory and research specifically relating to children's coping. With regard to interventions the authors identify four general categories of interventions to promote resilience	TLR

Coping studies used in Q. 1					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				and coping: enhancing of self-esteem, improving academic achievement, promoting social skills, and strengthening families and social supports. The authors also identify a relatively un-researched role for community and religious organizations.	

1.3 Salutogenesis studies used in Question One

Salutogenesis studies used in Q1.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Antonovsky (1998)	TLR	N/A	Discusses SOC concept and its applications	In this paper the author discusses the origins and rationale behind salutogenesis and the Sense of Coherence concept, the key concepts in the theory and how Sense of Coherence (SOC) has been researched since 1978 (and up until his death in 1994). Antonovsky also identifies some issues and limitations with how the theory has been applied and researched and he makes some recommendations for future research in this area in terms of research questions and data collection methods.	TLR
Charlton & White (1995)	TLR	N/A	Outlines a salutogenic model which might account for socio-economic differentials in health.	In this paper the authors propose using a salutogenic model to help account for socio-economic differentials in health. The key concepts in salutogenic theory are briefly outlined and the authors make the argument that resource differentials lead to stratified health outcomes owing to the differential capacity of individuals and groups to realise 'universal' psychological aspirations of a broadly 'health promoting' nature.	TLR
Christiansen	TLR	N/A	Discuss	In this paper the author discusses the problem of	TLR

Salutogenesis studies used in Q1.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
, C. (1999)			salutogenic theory and its application to therapy interventions.	'diseases of meaning' and proposes a salutogenic approach to explain the importance of 'meaning'. The author explains how people with a sense of coherence experience their lives as meaningful and manageable and refers to Antonovsky who argued that a sense of coherence is what enables people to cope under stressful conditions. The author makes conceptual links between SOC and identity and proposes that life-meaning is derived from personal identity and therefore an essential element in promoting well being. The authors discuss how such a theorisation can be applied to therapy and some environmental interventions.	
Eriksson & Lindstrom, (2005)	Systematic Review (non intervention studies) <i>Level: 3</i> <i>Quality: -</i> <i>No. studies: 471</i>	Not described- multiple countries	A systematic review of the validity of Antonovsky's sense of coherence scale.	In this review the authors provide historical background on salutogenesis and outline the key theoretical concepts in this approach. The review then systematically reviews and analyses the validity and reliability of Antonovsky's life orientation questionnaire/ sense of coherence scale. It is reported that SOC questionnaire is used in at least 33 languages in 32 countries with at least 15 different versions of the questionnaire. The review concludes that the SOC scale seems to be a reliable, valid and cross culturally applicable instrument measuring how people manage stressful situations and stay well.	B; multiple countries including some UK studies
Hansson & Cederblad (2004)	TLR	N/A	Discuss Salutogenesis and SOC as a framework which could guide family	In this paper the authors provide some background on Salutogenesis, discuss the key concepts of the theory and provide examples of research carried out using the SOC concept and scale. The authors propose a need to learn from families who have learnt to develop well under	TLR

Salutogenesis studies used in Q1.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			therapy	adverse conditions, in order to develop new therapeutic interventions.	
Lamprecht & Sack (2003)	TLR	N/A	Discusses the contribution of salutogenesis in understanding health and disease.	In this paper the authors develop a rationale for adopting a salutogenic approach in terms of accounting for variations in morbidity and mortality and the need to develop self management skills. The 'control' dimensions of salutogenic theory are discussed briefly.	TLR
Lindstrom & Eriksson (2005)	TLR	N/A	Explains and clarifies key concepts of the salutogenic theory sense of coherence.	In this paper the authors explain and clarify key concepts in salutogenic theory and sense of coherence.	TLR
Levin & Chatters (1998)	TLR	N/A	An overview of empirical findings and theoretical issues with regard to research on religion and mental health.	In this paper the author provides some background on salutogenesis and proposes a framework for a salutary religious effect on the mental health of older adults, which resonates strongly with Antonovsky's theorisations of comprehensibility, meaningfulness and manageability.	TLR
Taylor, J. S. (2004)	TLR	N/A	Discusses salutogenesis as a framework for child protection.	In this review the key concepts of salutogenesis and SOC are described and discussed. The author makes some links to resilience research and also raises some issues with how the theory has been applied and operationalised, as well as identifying gaps in the knowledge base on interventions linked to these theories.	TLR
Wallerstein,	TLR	N/A	Discusses theories	In this paper the author proposes an empowerment	N/A

Salutogenesis studies used in Q1.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
N (1992)			relating to powerlessness, empowerment and health and identifies implications for health promotion programs.	approach for health promotion, with some reference to salutogenic models. Key concepts in salutogenic theory are discussed, some issues are identified with regard to how the theory has been interpreted and applied and recommendations and implications for community based interventions are made.	

Question Two; How have researchers approached the areas of resilience, coping and salutogenesis?

2.1 Resilience studies used in Question Two.

Resilience Studies Used for Q2					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Blum, R. W. (1998)	TLR	N/A	Discusses approaches to research on resilience and interventions which promote resilience and positive youth development.	In this review key concepts in the resilience literature are described briefly and research approaches to the study of resilience are discussed. The author describes the scope of research in this area and discusses the types of methods used. Various issues with research practices are highlighted and recommendations are made for future research. The review also discusses two types of resilience promoting interventions; Life-Skills training and social development models.	TLR
Condly, S	TLR	N/A	Reviews some of	This review discusses the variability in definitions and	TLR

Resilience Studies Used for Q2					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
(2006)			the literature on children's resilience and identifies implications for education.	approaches to the study of resilience. The author also makes recommendations for the most appropriate methods for researching resilience.	
Delfabbro & Harvey (2004)	TLR	N/A	Provides a critical overview of the resilience literature.	This review comments on some of the conceptual difficulties and limitations with research on resilience, with particular regard to the selection of measures. The authors recommend a greater focus on reports and experiences of people who appear to have overcome adversity, and that the definition of resilience should be based upon culturally and socially relevant ratings of success.	TLR
Fergus & Zimmerman (2005)	TLR	N/A	Reviews some of the literature on resilience to present a framework for understanding healthy development in the face of risk.	This review discusses definitions and key concepts and models in the resilience literature and the authors also raise some concerns and ethical issues with the literature. With regard to research methods and approaches the authors make recommendations for appropriate methods and areas of study. With regard to interventions Life Skills Training is described and discussed as a resilience promoting approach.	TLR
Garmezy, N. (1993)	TLR	N/A	Discusses some of the literature on resilience with regard to child poverty.	This paper provides a brief overview of the background key concepts in the resilience literature with specific reference to children in poverty.	TLR
Glantz & Sloboda	TLR	N/A	Provides an overview of	This review discusses the different approaches and definitions used by resilience researchers and the	TLR

Resilience Studies Used for Q2					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
(1999)			different approaches to resilience and discusses some issues with the literature and research in this area.	<p>authors make some recommendations for future uses of the concept.</p> <p>With regard to research methods the authors identify issues with research on resilience and make recommendations for future research.</p>	
Kaplan, R (1999)	TLR	N/A	Provides a critical review of definitions and models of resilience.	This review discusses some of the different definitions and approaches used by resilience researchers and the author comments specifically on the high variability in definitions and operationalisations of resilience. The authors identify several issues with research on resilience, with particular regard to the selection of outcome variables and the absence of a theoretical and explanatory framework. The author makes several recommendations which could address some of the limitations and improve future research on resilience.	TLR
Luthar et al (2000)	TLR	N/A	Critically evaluates the construct of resilience and outlines guidelines for future work	<p>This review critically discusses some of the key concepts in the resilience literature and makes recommendations for improving the use of resilience concepts.</p> <p>With regard to research on resilience the authors provide some background on research in this area, they identify several issues and limitations with resilience research and make recommendations for how it could be improved in the future.</p>	TLR
Luthar & Cichetti (2000)	TLR	N/A	Provides overview of resilience literature and identifies implications for interventions and	<p>This review discusses some of the key concepts in the resilience literature. The authors provide some conclusive definitions of their own and identify some ethical issues with the resilience concept.</p> <p>With regard to research approaches this review briefly</p>	TLR

Resilience Studies Used for Q2					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			social policies	describes current tendencies and makes recommendations for improving future research. With regard to interventions the authors highlight some general issues and limitations with previous educational interventions and outline a number of guiding principles for future interventions and evaluations.	
Masten, A (2006)	TLR	N/A	Discusses resilience in emerging adulthood with reference to developmental perspectives.	In this review the author provides a brief but useful background to research on resilience in terms of approaches, focus and methods used.	TLR
Miller, D (1999)	TLR	N/A	Provides an overview of resilience literature with specific reference to African American adolescents	This review discusses different definitions of resilience and some of the key concepts of resilience. It is focused on the resilience literature in relation to African American adolescents and the author specifically suggests that racial identity may serve as a unique protective factor. The author also comments on the neglect of minority groups in research and calls for future research into the role and process of racial socialization/racial identity as a protective factor.	TLR
Murry et al (2001)	Weak quality systematic review of non-intervention studies (quantitative and qualitative). <i>Level: 3</i>	African American single mothers.	Reviews studies on Risk and Resilience among African American single mothers.	In what is relevant to this section the authors of this review highlight several issues with resilience research relating to African- Americans. The authors argue for the use of ecological risk/ protection models for research on studies of minority groups.	C (US based)

Resilience Studies Used for Q2					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
	Review quality: - No. studies not stated.				
Olsson et al. (2003)	TLR	N/A	Provides a concept analysis of resilience with reference to adolescents.	This review discusses the different definitions and approaches to the study of resilience. The authors outline and describe some of the critical concepts, highlight some issues with how resilience has been researched and make recommendations for future uses of the construct in research.	TLR
Raphael, D (1996)	TLR	North American Adolescents	Reviews the literature on the determinants of health of North American Adolescents	In this broadly focused review on the determinants of health of North American adolescents the authors makes the point that there has been too much of a focus on individual/ family factors in considerations of resiliency (and public health research generally) and a neglect of wider contexts and the structural determinants of health. The author subsequently recommends that increased attention is paid by researchers to societal and structural determinants of health and at a policy level that there is a focus on economic resource allocation, employment and social and health policies.	TLR
Rutter, M. (1993)	TLR	N/A	Discusses conceptual issues with resilience.	This review discusses various conceptual issues with the resilience literature. The author offers definitions and descriptions of several of the key constructs associated with resilience and makes methodological recommendations for future research.	N/A
Ryff et al (1998)	TLR	N/A	Discusses some of the defining features of resilience with specific reference	This review discusses some of the key concepts in the resilience literature and provides some historical background on research in this area. Specifically it is making the point that the vast majority of research has dealt with early childhood and adolescence and the	N/A

Resilience Studies Used for Q2					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			to adulthood and later life.	authors call for more research on resilience with regard to older groups.	
Sandler, I (2001)	TLR	N/A	Discusses mechanisms of risk and resilience from ecological perspective.	In this review the author presents an ecological conceptualisation of resilience. He proposes that an individual has 4 basic needs: safety, control, self worth, belongingness. It is argued that protective resources affect these needs to promote resilience, and that these resources come from multiple levels; individual, microsystem, cultural and community levels. The author identifies some gaps in the research and also makes several recommendations for resilience enhancing interventions.	TLR
Stanton-Salazar & Spina (2000)	TLR	N/A	Reviews and critiques resiliency research from a Critical Network perspective and highlights educational implications	In this review the authors critique the ideological, individualistic biases in most resiliency research and propose a Critical Network Analysis perspective on resilience which considers structural influences on the perspectives and experiences of disadvantaged groups. The authors make several recommendations for policy approaches and interventions.	TLR
Tusaie & Dyer (2004)	TLR	N/A	Provides a historical review of the construct of resilience and considers how it has been researched.	In this review different definitions and models of resilience are discussed and the key concepts in the resilience literature are described and some issues considered. With regard to research the review describes common approaches used by researchers and the authors also make recommendations for the improvement of future research.	TLR
Ungar, M	TLR	N/A	Discusses the	In this paper the author builds an argument for the use of	TLR

Resilience Studies Used for Q2					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
(2003)			potential for qualitative contributions to resilience research	qualitative methods in resilience research and identifies several weaknesses with existing research in the area.	
Walsh, F. (1996)	TLR	N/A	Discusses research and interventions relating to family resilience.	In this paper the author discusses research methods used in the area of family resilience and also describes the aims, approaches and rationale of resilience oriented services designed to foster family empowerment.	TLR
Windle, M. (1999)	TLR	N/A	Discusses critical conceptual and measurement issues in the study of resilience.	In this review the different definitions and approaches to resilience are critically discussed. The author outlines what he considers to be the key constructs and defining features of resilience and the most appropriate conceptual and methodological approaches to the study of resilience are discussed. The author makes specific recommendations for future research in the area.	TLR
Yates et al (2003)	TLR	N/A	Outlines a developmental process perspective on resilience.	In this paper the authors outline an organizational developmental model of resilience. From this perspective it is argued that the successful negotiation of early development issues provide a foundation for the process of resilience among disadvantaged youth. Resilience is therefore seen as a dynamic developmental process that enables children to achieve positive adaptation despite prior or concomitant adversity. The authors consequently highlight a need for prevention and intervention programs aimed at developing strong, supportive, responsive and successful early parent-child relationships.	TLR

2.2 Coping studies used for Question Two.

Coping Studies used for Q2					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Aspinwall (2004)	TLR	N/A	Reviews the literature on models of coping and self-regulation.	This review discusses the transactional model of coping, methods used to research coping and some limitations with research in this area. These limitations apparently make it difficult to determine what makes an event stressful, what people do to manage the stressor and why and how specific ways of coping are related to later psychosocial and health outcomes. The author recommends the use of idiographic approaches used in self regulation research as an alternative method which is capable of providing a much richer picture of people managing multiple goals and self conceptions.	TLR
Fields & Prinz (1997)	TLR	N/A	Reviews some of the literature on coping and adjustment during childhood and adolescence	This review discusses the transactional model of coping, different approaches to the study of stress and coping, different models and categorisations of coping responses (eg problem focused/ emotion focused, active/ avoidance coping). On the subject of children's coping the review authors suggest that categorization of stressors by controllability may not be useful and that coping with stress in children may be better studied according to the situational context of the stressor rather than broad band stressor groups (ie daily hassles or major life events). The review authors discuss the state of research in Children's coping and the different approaches and measures used by researchers in the field.	TLR
Frydenberg (2002)	TLR	N/A	Provides a synthesis of the different theoretical models that have	This review discusses the historical background and the development of coping research and describes and synthesises situational and dispositional models of coping.	TLR

Coping Studies used for Q2					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			been developed in the field of stress and coping and provides a way forward beyond the traditional stress and coping paradigms.		
Gonzales & Kim (1997)	Weak systematic review of interventions studies (RCT and non-RCT) <i>Level: 1&2</i> <i>Review quality: -</i> <i>No studies not stated.</i>	Minority ethnic youth.	Reviews research literature on stress and coping within an ecological framework and with specific reference to ethnic minorities.	In this review the empirical literature on the coping of minority ethnic groups is discussed, with a key point being that this literature is significantly lacking. The authors also describe culturally sensitive preventive interventions for ethnic minority youth, including five family focused and three coping skills interventions.	C (US studies)
Moos & Holahan (2003)	TLR	N/A	Provides overview of dispositional and contextual models of coping and outlines an integrative framework.	This review outlines and synthesises different approaches and perspectives on coping (transactional and dispositional) and explains that contemporary theorists generally recognize that the dispositional and contextual approaches have complementary strengths. Also discusses and synthesises types of coping responses (eg cognitive and behavioural) With regard to research approaches the review discusses the use of dispositional and situational	TLR

Coping Studies used for Q2					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				measures in coping research.	
Outlaw, F. (1993)	TLR	N/A	Considers stress and coping literature with specific regard to the influence of racism on the cognitive appraisal processing of African Americans	<p>This paper discusses Lazarus and Folkman's (1984) cognitive-appraisal framework. The authors suggest this model to be an appropriate theoretical perspective from which to examine African American responses to stress and the influence of racism on the appraisal, stress, and coping of this group.</p> <p>With regard to research the author describes a shortage of research on the coping and experiences of African Americans and suggests that a failure to recognise these experiences is likely related to inadequacies in health care provision for this group.</p>	TLR
Rosella & Albrecht, (1993).	TLR	N/A	Discusses the stress-coping framework as a model which can be applied to understandings of the health status of Black adolescents.	This review stresses the importance of consideration of stress-coping processes when evaluating health needs and problems, with particular reference to the needs of black adolescents. A transactional perspective is used to frame the discussion on coping resources. External and internal mediating factors are identified. However, it is also pointed out that very little systematic work or theory building research has been conducted on black youth living in urban poverty conditions and further research efforts are needed for this group, which could then inform culturally sensitive self report instruments and interventions	TLR
Rosella, J. D (1994)	Systematic Review (non-intervention, quantitative)	Adolescents.	Reports on demographic features and measures used in adolescent coping	This systematic review of adolescent coping research found that the majority of studies investigated coping among both gender groups, but only 46.7% reported information on SES. Only 53% reported information on	C (US studies).

Coping Studies used for Q2					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
	studies) (3-). Level: 3 <i>Review quality:</i> - No studies not stated.		research and highlights several issues with research.	racial composition and where this was reported minorities were shown to be underrepresented in research. 73.3% of studies used questionnaire format, 26.7% used open-ended formats. No studies used interviews. The review discusses the different types of measures used in studies of adolescent coping and also highlights and discusses some issues with research and makes recommendations for future research.	

2.3 Salutogenesis studies used for Question Two.

Salutogenesis studies used for Q2.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Antonovsky (1998)	TLR	N/A	Discusses SOC concept and its applications	In this paper the author discusses the origins and rationale behind salutogenesis and the Sense of Coherence concept, the key concepts in the theory and how Sense of Coherence (SOC) has been researched since 1978 (and up until his death in 1994). Antonovsky also identifies some issues and limitations with how the theory has been applied and researched and he makes some recommendations for future research in this area in terms of research questions and data collection methods.	TLR
Eriksson & Lindstrom, (2005)	Systematic Review (non intervention studies)	Not described- multiple countries	A systematic review of the validity of Antonovsky's	In this review the authors provide historical background on salutogenesis and outline the key theoretical concepts in this approach. The review then systematically reviews and analyses the validity and	B; multiple countries including some UK studies

Salutogenesis studies used for Q2.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
	<i>Level: 3</i> <i>Quality: -</i> <i>No. studies: 471</i>		sense of coherence scale.	reliability of Antonovsky's life orientation questionnaire/ sense of coherence scale. It is reported that SOC questionnaire is used in at least 33 languages in 32 countries with at least 15 different versions of the questionnaire. The review concludes that the SOC scale seems to be a reliable, valid and cross culturally applicable instrument measuring how people manage stressful situations and stay well.	
Hansson & Cederblad (2004)	TLR	N/A	Discuss Salutogenesis and SOC as a framework which could guide family therapy	In this paper the authors provide some background on Salutogenesis, discuss the key concepts of the theory and provide examples of research carried out using the SOC concept and scale. The authors propose a need to learn from families who have learnt to develop well under adverse conditions, in order to develop new therapeutic interventions.	TLR
Udris et al (1994)	TLR	N/A	Discusses salutogenesis with reference to health promotion approaches.	In this paper the authors briefly discuss salutogenic concepts and their relevance to health promotion approaches and provides an example of a piece of health promotion research carried out within a salutogenic framework.	TLR

Q3. How have these theories been applied in practice: what kind of initiatives are there and what are there core characteristics and rationales?

3.1 Resilience studies used for Question Three.

Resilience studies used for Q3					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK

Resilience studies used for Q3					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Blum, R. W. (1998)	TLR	N/A	Discusses approaches to research on resilience and interventions which promote resilience and positive youth development.	In this review research approaches to the study of resilience are discussed. The author describes the scope of research in this area and discusses the types of methods used. Various issues with research practices are highlighted and recommendations are made for future research. The review also discusses two types of resilience promoting interventions; Life-Skills training and social development models.	TLR
Doll & Lyon (1998)	TLR	N/A	Considers the potential and limitations of resilience interventions in schools.	This review discusses the potential and limitations of resilience interventions. The authors accuse past interventions of educational 'faddism' and make recommendations for how interventions could be improved to eliminate sources of risk and enhance sources of support. On a general note the author also expresses concerns that resilience literature may be used to justify limited expenditure on tackling poverty and stresses a need for policies which target social institutions.	TLR
Dubois et al (2002)	Weak quality meta-analysis of RCT and Non RCT studies Level: 1 + 2 Review quality: - No studies:	Majority non white (n=26), majority white (n=15) 22 studies of low SES groups, mixed gender, children and adolescents. Participants (30 studies;	Review and meta-analysis of the effectiveness of mentoring programs	This review is used mainly for Question Five, but is also cited in Question Three as an example of interventions, in this case mentoring interventions, which have been linked to resilience. See Question Five for results on effectiveness.	C (US studies)

Resilience studies used for Q3					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
	59	n=<65, 29 studies; n=>65)			
Fergus & Zimmerman (2005)	TLR	N/A	Reviews some of the literature on resilience to present a framework for understanding healthy development in the face of risk.	<p>This review discusses definitions and key concepts and models in the resilience literature and the authors also raise some concerns and ethical issues with the literature.</p> <p>With regard to research methods and approaches the authors make recommendations for appropriate methods and areas of study.</p> <p>With regard to interventions Life Skills Training is described and discussed as a resilience promoting approach.</p>	TLR
Luthar & Cicchetti (2000)	TLR	N/A	Provides overview of resilience literature and identifies implications for interventions and social policies	<p>This review discusses some of the key concepts in the resilience literature. The authors provide some conclusive definitions of their own and identify some ethical issues with the resilience concept.</p> <p>With regard to research approaches this review briefly describes current tendencies and makes recommendations for improving future research.</p> <p>With regard to interventions the authors highlight some general issues and limitations with previous educational interventions and outline a number of guiding principles for future interventions and evaluations.</p>	TLR
Meschke & Patterson (2003)	TLR	N/A	Provides an overview of some of the resilience literature and	This review discusses some of the different definitions and perspectives on resilience and identifies several types of resilience promotion programs that are related to youth substance use, including individual focused,	TLR

Resilience studies used for Q3					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			proposes resilience as a theoretical basis for substance abuse prevention.	family focused, peer focused and community focused. The authors conclude that developmentally appropriate programs that strive to enhance protective mechanisms at the individual, family, peer and/or community levels may help prevent substance use as well as also other risk behaviours.	
Miller et al. (1998)	TLR	N/A	Discusses school-based Prevention for Antisocial Behavior within a Resilience Framework.	In this review the authors suggest the importance of school bonding as offering powerful protection against anti-social behaviour and drug use, and they outline 3 social learning mechanisms that instil bonding. The review identifies and describes classroom, school wide and multi-setting prevention programs. The authors also highlight some issues with intervention research and make some recommendations for future research practices and intervention approaches.	TLR
Minnard, C (2002)	TLR	N/A	Discusses approaches to building protective factors in schools.	In this paper the author outlines the 3 social learning mechanisms that instil bonding and describes the features of a resilience promoting project. The authors also identify problems relating to interventions and a gap in the evidence base on the effectiveness of programs designed explicitly to promote resilience.	TLR
Olsson et al. (2003)	TLR	N/A	Provides a concept analysis of resilience with reference to adolescents.	This review discusses the different definitions and approaches to the study of resilience. The authors outline and describe some of the critical concepts, highlight some issues with how resilience has been researched and make recommendations for future uses of the construct in research.	TLR
Patterson, J. M.	TLR	N/A	Provides an overview of the	This review discusses some of the key concepts and applications of the emerging field of family resilience.	N/A

Resilience studies used for Q3					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
(2002)			family resilience field.	The author highlights the potential of such a perspective with regards to clinical practice but also stresses that adequate resources must be available in the ecological context to facilitate the development of protective processes within families and to reduce the ecological risks that undermine family functioning.	
Pianta & Walsh (1998)	TLR	N/A	Discusses issues in applying the Construct of Resilience in Schools from a Developmental Systems Perspective.	In this paper the authors critically consider the potential and the limitations of applying resilience to educational approaches, and are writing from a developmental systems perspective. Issues with previous resilience programs are discussed and various recommendations are made for resilience enhancing school approaches.	TLR
Raphael, D (1996)	TLR	North American Adolescents	Reviews the literature on the determinants of health of North American Adolescents	In this broadly focused review on the determinants of health of North American adolescents the authors makes the point that there has been too much of a focus on individual/ family factors in considerations of resiliency (and public health research generally) and a neglect of wider contexts and the structural determinants of health. The author subsequently recommends that increased attention is paid by researchers to societal and structural determinants of health and at a policy level that there is a focus on economic resource allocation, employment and social and health policies.	TLR
Sandler, I (2001)	TLR	N/A	Discusses mechanisms of risk and resilience from ecological perspective.	In this review the author presents an ecological conceptualisation of resilience. He proposes that an individual has 4 basic needs: safety, control, self worth, belongingness. It is argued that protective resources affect these needs to promote resilience, and that these resources come from multiple levels; individual, microsystem, cultural and community levels.	TLR

Resilience studies used for Q3					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				The author identifies some gaps in the research and also makes several recommendations for resilience enhancing interventions.	
Smokowski (1998)	TLR	N/A	Describes features of early childhood programs for disadvantaged children.	In this review the author describes key features of early childhood programs and elementary school approaches which are aimed at fostering resilience in disadvantaged children. Issues are highlighted with respect to programs and evaluation studies and a few recommendations are made for interventions and future evaluations of interventions.	TLR
Stanton-Salazar & Spina (2000)	TLR	N/A	Reviews and critiques resiliency research from a Critical Network perspective and highlights educational implications	In this review the authors critique the ideological, individualistic biases in most resiliency research and propose a Critical Network Analysis perspective on resilience which considers structural influences on the perspectives and experiences of disadvantaged groups. The authors make several recommendations for policy approaches and interventions.	TLR
Walsh, F (2002)	TLR	N/A	Outlines a family resilience framework for clinical practice.	In this paper the author provides some historical background on the emergent area of family resilience and outlines some of the key concepts in the literature.	TLR
Walsh, F. (1996)	TLR	N/A	Discusses research and interventions relating to family resilience.	In this paper the author discusses research methods used in the area of family resilience and also describes the aims, approaches and rationale of resilience oriented services designed to foster family empowerment.	TLR
Wolff, S. (1995)	TLR	N/A	Provides an overview of the	This paper briefly reviews definitions and key concepts in the resilience literature before considering some single	TLR

Resilience studies used for Q3					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			concept of resilience.	case study examples. The author also highlights the significance of macro-structural influences for fostering childhood resilience.	

3.2 Coping studies used for Question Three,

Coping studies used for Q3					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Gonzales & Kim (1997)	A weak systematic review of interventions studies (RCT and non-RCT) Level; 1&2 Review quality: - <i>No studies: 8</i>	Minority ethnic youth.	Reviews research literature on stress and coping within an ecological framework and with specific reference to ethnic minorities.	In this review the empirical literature on the coping of minority ethnic groups is discussed, with a key point being that this literature is significantly lacking. The authors also describe culturally sensitive preventive interventions for ethnic minority youth, including five family focused and three coping skills interventions.	C (US studies)
Haggerty et al (1996)	TLR	N/A	Provides a brief overview of the stress, coping and interventions literature	This review discusses the historical background and development of coping research. The author recommends that research today should be focusing on processes and mechanisms by which children of different ages deal with adverse life experiences, rather than simply studying the stressors. With regard to interventions the author describes some unifying aspects of coping interventions which are identified as; helping youth to become masters of their own fate, problem solving skills, fostering links with	TLR

Coping studies used for Q3					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				social supports and providing comprehensive services.	
Pincus & Friedman, (2004)	TLR	N/A	Discusses coping models and considers implications for interventions.	<p>This review outlines and discusses the cognitive appraisal model of coping, describes the coping process and discusses type and effectiveness of coping responses.</p> <p>With regard to interventions the authors suggest a rationale that coping skills can be taught and describes school based intervention programs which focus primarily on teaching children about the problem solving "process" or about "direct action" types of problem solving strategies. The authors suggest that much less is reported to be known about the effects of teaching children emotion-focused coping skills.</p>	N/A
Sandler et al. (1997).	TLR	N/A	Provides overview of different coping models and discusses their potential linkages to interventions.	<p>This review discusses the different models of coping; psychoanalytic, transactional and motivational.</p> <p>With regards to interventions it identifies and discusses 3 distinguishable approaches to interventions to enhance adaptive coping; 1) Building stable coping resources and styles 2) Assisting in coping with the tasks of specific stressful situations 3) Enhancing support. The authors also discuss some issues with coping interventions and evaluations of interventions.</p>	TLR
Smith & Carlson (1997)	TLR	N/A	Discusses models of coping with specific reference to coping and resilience in children and youth,	This review suggests a significant growth in studies of resilience and coping and discusses and describes the coping process from a transactional perspective, discusses stressor types and coping resources and discusses theory and research specifically relating to children's coping.	TLR

Coping studies used for Q3					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			and identifies coping interventions.	With regard to interventions the authors identify four general categories of interventions to promote resilience and coping: enhancing of self-esteem, improving academic achievement, promoting social skills, and strengthening families and social supports. The authors also identify a relatively un-researched role for community and religious organizations.	

3.3 Salutogenesis studies used for Question Three.

Salutogenesis studies used for Q3.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Christiansen, C. (1999)	TLR	N/A	Discuss salutogenic theory and its application to therapy interventions.	In this paper the author discusses the problem of 'diseases of meaning' and proposes a salutogenic approach to explain the importance of 'meaning'. The author explains how people with a sense of coherence experience their lives as meaningful and manageable and refers to Antonovsky who argued that a sense of coherence is what enables people to cope under stressful conditions. The author makes conceptual links between SOC and identity and proposes that life-meaning is derived from personal identity and therefore an essential element in promoting well being. The authors discuss how such a theorisation can be applied to therapy and some environmental interventions.	TLR
Hansson	TLR	N/A	Discuss	In this paper the authors provide some background on	TLR

Salutogenesis studies used for Q3.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
& Cederblad (2004)			Salutogenesis and SOC as a framework which could guide family therapy	Salutogenesis, discuss the key concepts of the theory and provide examples of research carried out using the SOC concept and scale. The authors propose a need to learn from families who have learnt to develop well under adverse conditions, in order to develop new therapeutic interventions.	
Lamprecht & Sack (2003)	TLR	N/A	Discusses the contribution of salutogenesis in understanding health and disease.	In this paper the authors develop a rationale for adopting a salutogenic approach in terms of accounting for variations in morbidity and mortality and the need to develop self management skills. The 'control' dimensions of salutogenic theory are discussed briefly.	TLR
Taylor, J. S. (2004)	TLR	N/A	Discusses salutogenesis as a framework for child protection.	In this review the key concepts of salutogenesis and SOC are described and discussed. The author makes some links to resilience research and also raises some issues with how the theory has been applied and operationalised, as well as identifying gaps in the knowledge base on interventions linked to these theories.	TLR
Wallerstein, N (1992)	TLR	N/A	Discusses theories relating to powerlessness, empowerment and health and identifies implications for health promotion programs.	In this paper the author proposes an empowerment approach for health promotion, with some reference to salutogenic models. Key concepts in salutogenic theory are discussed, some issues are identified with regard to how the theory has been interpreted and applied and recommendations and implications for community based interventions are made.	N/A
Wiser, A (2005)	TLR	N/A	Reviews literature that investigates the influence of the	This review applies a salutogenic framework in its considerations of the literature on the influence of residential and institutional settings on the health of older	N/A

Salutogenesis studies used for Q3.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			built environment on the health of older people.	people.	

4.1 Evidence tables for Question Four. What evidence has been produced on the positive adaptation of people despite conditions of social-structural adversity?

4.1. What evidence is there on protective factors and processes that moderate or mediate relationships between structural disadvantage and developmental or health related outcomes?

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Berkman, L. (1995)	TLR	SES controlled, ethnicity not stated, age and gender mixed.	Reviews evidence on the role of social relations in health promotion	This review reports study findings of a negative relationship between social support and mortality. The author recommends designing, testing and implementing social support interventions and efforts to develop family and community strengths	TLR (Likely US based)
Coleman and Karaker (1998)	TLR	SES controlled, ethnicity not stated, mothers	Reviews evidence on self efficacy and parenting quality.	This review provides evidence which suggests the importance of self-efficacy as a mediator of social support, disadvantage and maternal competence. The authors suggest that once parents internalise a sense of competency in the role, satisfaction in pleasure and parenting become attainable even under marginal ecological conditions. The authors call for research to	TLR (Likely US based)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				address the specifics of how to enhance self efficacy in the parental domain and to develop interventions that enhance parental self-efficacy; not just by focusing on knowledge and skills, but also by building faith in abilities.	
Demo & Cox (2000)	Weak quality systematic review of non-intervention studies <i>Level: 3</i> <i>Review quality: -</i> No of studies not stated.	Some studies low SES, families.	Reviews research evidence on families with young children in the 1990s	In this review the few studies cited on protective factors point to consistent parental support and discipline as mediating between risk/ poverty and adjustment. The authors conclude by suggesting the importance of family relationships and resources for children's development and well being, but they also point to the need for caution in generalising between groups. The authors recommend building support networks and resources for families.	C (US studies)
Edari & McManus (1998)	TLR	Low income children and young people, mixed gender and mixed ethnicity.	Reviews the evidence on risk and resiliency factors for violence and discusses some issues with resiliency research	This review provides evidence on individual, family and community level protective factors; <u>Individual factors included</u> ; self-esteem, self concept, positive orientation to surroundings, internal locus of control, easy going temperament, curiosity, flexibility and adaptability, general competence, social skills, intelligence, problem solving abilities. <u>Family factors included</u> ; supportive family environment, kinship networks, strong parental supervision and monitoring, physical space. <u>Community level factors included</u> ; social networks, 'psychological sense of community', community norms. The review also highlights evidence which suggests that the severity of the level of deprivation influences community organisation and networks, as well as evidence on the important role played by local services such as schools, and the importance of having	TLR (Likely US based)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				opportunities for community participation.	
Ellison & Levin (1998)	TLR	SES controlled, gender mixed, ethnicity/ age not stated.	Reviews evidence on the religion-health connection and outlines some theoretical explanations.	This review provides evidence of the positive effects of religious involvement on health and the author summarises various proposed mechanisms for this effect, all of which are in need of further exploration. The author recommends that future research should distinguish between the roles of various different aspects of religious involvement in reducing specific morbidity and in the treatment of and recovery from particular diseases. The author suggests a role for qualitative research to clarify ways in which religion is involved in shaping various health outcomes.	TLR (Likely US based)
Fratiglioni, L (2004)	TLR	SES/gender/ ethnicity controlled, older age groups.	Reviews evidence to test the hypothesis that active and socially integrated lifestyle in late life might protect against dementia.	This review provides evidence of a negative association between social support and cognitive decline, which is said to support the hypothesis that an active and socially integrated lifestyle in late life protects against dementia. The author recommends research into how social networks might act through psychological pathways such as emotional support, feelings of integration and meaning in life.	TLR (reports studies from multiple countries)
George & Ellison (2002)	TLR	SES, gender, ethnicity controlled (in some studies), mostly older age groups.	Explaining the relationships between religious involvement and health.	This review reports evidence of significant relations between religious involvement and health when covariates are controlled. It reports that only a few studies have looked at mediators of religious involvement and health. The findings on mediating factors are as follows; Health practices seem to partially mediate There is no evidence on social support as a mediator although there is evidence of social support as an independent predictor; There is no evidence on psychosocial resources as a	TLR (Likely US based)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				<p>mediator; Evidence from 1 study suggested a likely role of Sense of Coherence. The authors conclude that we are far from understanding the mechanisms of religious effects. For future research they recommend the over-sampling of non-Christian groups, and research which explores alternative mechanisms to standard risk/ protective mechanisms, the effects of personality traits and the use of measures of long term participation.</p>	
Gonzales & Kim (1997)	TLR (evidence for this question is TLR; systematic searches used for evidence on effectiveness).	Low income, minority ethnic groups, children and teenagers, mixed gender.	Reviews evidence on factors contributing to the stress and coping of ethnic minority groups, with particular attention to evidence on the cultural ecologies of these groups. The review also reviews coping interventions which are discussed in the tables for Q5.	<p>This review provides some evidence on protective factors and adaptive processes and responses relating to minority ethnic groups. Family level protective factors included; parent-child relationships, warm family environments, processes of ethnic socialization and extended family Kinship networks. Evidence was also cited which suggest racial identity and religion as protective factors, along with findings which suggest that locus of control may not contribute to resilience among black students (whereas this is often a commonly cited protective factor for other groups).</p> <p>With regard to adaptive processes, the review authors cited the ethnographic findings of Ogbu (1986), that African-American students experiencing feelings of alienation and isolation from social and economic mainstream often reject academic achievement as it is seen as irrelevant to success within their own community and has come to be seen as 'acting white'. The authors suggest that these responses may be 'adaptive' in so far as they may help protect a sense of self in a context of damaging ethnic stereotypes.</p>	TLR (Likely US based)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				The authors conclude that a lack of attention has been paid to the contexts in which coping occurs for these groups and they stress the importance of considering contextual/ cultural influences on adaptive responses.	
Gorman-Smith & Tolan (2003)	TLR	Low income, youth, ethnicity not stated, gender mixed.	Reviews evidence on positive adaptation among youth exposed to community violence.	This review provides evidence on protective factors at the family and community level. <u>Family level factors</u> included family structure and family cohesion. <u>Neighbourhood factors</u> included sense of belonging, and the provision of informal supports such as child care. The authors conclude that there is insufficient research to understand the limits of positive adaptation and the extent to which positive outcomes along multiple dimensions are possible. They recommend that research should evaluate multiple outcomes within single studies, and move away from lists and towards processes that can be the target of interventions. For interventions the authors recommend building groups for social supports and family level interventions.	TLR (US based likely)
Hastings et al (2005)	TLR	Low income families	Reviews evidence on the relationships between poverty and family functioning.	This review contains a small but relevant section on the coping strategies used by poor families. Three main strategies were identified; social networks, supplementary employment and the use of public private social services (in order of preference). The general conclusion of the review was of the struggle and unmet needs of families living in poverty. The authors call for a closer look at place based poverty and promising programs and preventions.	TLR (US based likely)
Kitano & Lewis (2005)	TLR	Low income, young people, mixed ethnicity, mixed gender.	Reviews evidence on resilience and coping, with a view to identifying	This review provides evidence on individual level and family/ community level protective factors. <u>Individual level factors include</u> ; self concept, internal locus of control, general competence and intelligence	TLR (US based likely)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			implications for gifted children and youth at risk.	<p><u>Family/ community factors include:</u> positive relationships. However the review also cites evidence that intelligence could serve as a vulnerability factor for high risk, inner city adolescents and that locus of control may not contribute to resilience among black students.</p> <p>The review concludes that families, communities and schools can enhance resilience by focusing on alterable factors such as social support, interpersonal skills and educational aspirations. For educational approaches the authors recommend high expectations and learner centred instruction.</p>	
Levin & Chatters (1998)	TLR	SES controlled 1 study, mixed ethnicity and gender, mostly older groups.	Reviews empirical findings and theoretical issues on the relationship between religion and mental health.	Only one study could be used as evidence in this review as it was the only study which was explicitly described as controlling for SES. This study found that religious attendance in the youngest generation of Mexican Americans predicted less depression, and this withstood controlling for the effects of baseline depression, subsequent religious attendance and socio-demographic factors. The authors conclude that the role of religion in promoting mental health has empirical support and warrants more serious consideration.	TLR (US based likely)
Lynch, M (2003)	TLR	Low income, children, ethnicity and gender not stated.	Consequences of Children's exposure to community violence	This review provides evidence of family support, parental education and monitoring, supportive relationships, school support and to some extent peer support as moderators of the impact of community violence. The authors recommend further exploration and articulation of the complex links between violence exposure and developmental outcomes. This would enable more focused approaches to intervention so as to increase the likelihood of resilience.	TLR (US based likely)
McDermott & Graham (2005)	Weak quality systematic review of non-	Low income, white mothers under the age of	Reviews qualitative research on the mothering practices of	This review provides evidence on how young mothers draw on limited and constrained resources to negotiate best possible identities, relationships and mothering	A (UK studies)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
	intervention studies, qualitative research. <i>Level: 3</i> <i>Review Quality: -</i> No. Studies: 20	25.	'resilient young mother'	practices in the face of poverty and stigma. The synthesis highlights the difficulties that young mothers experience in constructing a positive identity due to their positioning as 'unsuitable mothers', but also how they resist their positioning as an unfit mother by investing in the 'good' mother identity. Kinship ties are also identified as a crucial source of support. The authors highlight a dearth of UK based literature, and for future research suggest using young black mothers as a comparative group and also including studies from other post modern societies.	
Maddox & Prinz (2003)	TLR	SES controlled in some studies, children and teenagers, mixed ethnicity and mixed gender.	Reviews research evidence on the significance of school bonding in Children and Adolescents.	This review reports consistent findings on the effect of school bonding on substance use, delinquency, anti-social behaviour, academic performance, self esteem and self efficacy. However, the review also reports that few studies controlled for SES and when other factors were considered as moderators there was shown to be less affect. The authors call for research which focuses specifically on positive outcomes as opposed to simply avoidance of negative ones, and research which considers moderators such as SES. They recommend interventions that promote opportunities and skills for school involvement.	TLR (US based likely)
Meschke & Patterson (2003)	TLR	Low income, adolescents, mixed ethnicity/ gender.	Reviews evidence on protective factors associated with less substance abuse and outlines a resilience framework for substance use prevention.	This review provides evidence on individual, family and community factors associated with less substance use; <u>Individual factors identified include:</u> religious, academic, competence, social skills, <u>Family factors identified include:</u> good communication and authoritative relationships, <u>Community factors identified include:</u> sense of belonging and connectedness and attachment to school. The authors call for more research into the protective	TLR (US based likely)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				effects of peers, and the moderating/ mediating effects of community for high risk youth. For interventions they recommend an ecological framework, comprehensive programs which target high risk youth and person centred approaches which are tailored to the needs of different risk groups.	
Murry et al (2001)	Weak quality systematic review of non-intervention studies (quantitative and qualitative). <i>Level: 3</i> <i>Review quality: -</i> No. studies not stated.	Low income, African American single mothers.	Reviews studies of risk and resilience with regard to single African American mothers.	This review provides evidence on factors which positively affect maternal functioning and child adjustment at the individual, family and community level. <u>Individual level factors include:</u> maternal self-esteem, control and self-efficacy; <u>Family factors include:</u> quality of mother-child relationships, authoritative parenting; <u>Community factors include:</u> neighbourhood resources and local services, social support and kinship networks, which are identified as providing goods, services and socio-emotional support. The review also presents some evidence which suggests that material factors may account for some of the differences that exist between disadvantaged groups in that in more impoverished areas people have less access to networks. The authors conclude that there is a need for greater consideration of the circumstances under which parenting practices in these families are strengthened and a need to consider the social processes that explain adjustment and development, as well as the extreme environmental and racialised stressors in which many of these people live.	C Studies all US based.
Nettles & Pleck (1996)	TLR	Black adolescents in US.	Reviews research evidence on risk, resilience and development	This review provides evidence on individual, family and community level factors that contribute to the resilience of black youths. <u>Individual level factors include:</u> high educational	TLR US based (C)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			among black adolescents in the US, with reference to an ecological framework.	<p>expectations and strong achievement motivation. In contrast with much other evidence on protective factors the review also pointed to evidence which suggests that self esteem may not account for generally poorer performance of black students and that locus of control may not contribute to resilience among black students. Evidence was also cited which suggests that racial or ethnic consciousness may protect against the impact of racism/ discrimination, but also that oppositional social identities, characterised by responses to racism can be a source of vulnerability in a school setting. However, 'race-less' identities associated with educational resilience may put black students at risk of poor social development.</p> <p><u>Family level factors identified include:</u> nurturing and supportive care-giving, structured and authoritative parenting, strong parental supervision and monitoring and ethnic socialization.</p> <p><u>Community factors include:</u> social networks and social support.</p> <p>Evidence was also provided on the positive effects of religious involvement and the effects that school approaches can have on outcomes among students.</p> <p>With regard to adaptive 'processes' this review cited the ethnographic findings of Ogbu (1986), that African-American students experiencing feelings of alienation and isolation from social and economic mainstream often reject academic achievement as it is seen as irrelevant to success within their own community and has come to be seen as 'acting white'</p> <p>The authors call for analysis which differentiates by</p>	

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				gender and SES, for research into community resilience and for research into out of school contexts of behaviours. With regard to interventions they suggest that resilience could be fostered through development of psychosocial components: knowledge, management skills and personal meaning.	
Pincus & Friedman (2004)	TLR	SES controlled in some studies, children, ethnicity/ gender not stated.	Reviews evidence on Children's coping with everyday stress and makes recommendations for school based prevention programs.	This review provides evidence from studies across diverse age groups, socio-economic groups and clinical samples, which suggest that children who have better problem-solving skills are better adjusted. The review also cites pieces of evidence which suggest the context dependency of coping responses, and that appraisals of controllability influence coping responses. Evidence is also cited which suggests that the use of multiple coping responses (emotion and problem) is a predictor of psychological adjustment, although no information was provided on how these relate to different socio-economic groups. With regard to interventions the authors suggest a need for programs which include problem solving and emotion focused coping skills components.	TLR (US based likely)
Roosa et al (2003)	TLR	Low income, children, mixed ethnicity/ gender.	Reviews empirical evidence on neighbourhood influences on low-income children's development, and discusses theoretical and methodological issues with this research.	This review provides evidence which suggest that family factors and community factors mediate neighbourhood influences on developmental outcomes. <u>Family factors identified include:</u> supervision, parenting quality/ approaches, kin networks. <u>Community factors identified include:</u> positive and caring relationships and informal supports such as child care. The review also highlights evidence which suggests that the severity of the level of adversity will impact upon community and social networks. The authors recommend that future research should be carried out from a transactional perspective, which can better pick out mediators and account for individual	TLR (US based likely)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				differences.	
Samaan, R (2000)	A weak systematic review of non-intervention studies (quantitative and qualitative) <i>Level: 3</i> <i>Review Quality: -</i> No of studies not stated	SES controlled, youth, mixed ethnicity and gender. N=over 100 participants for each study.	Reviews evidence on the influences of race, ethnicity and poverty on the mental health of children.	In this review only a small section of findings were relevant to the topic area. These study findings demonstrated protective factors against mental illness in ethnic groups who were the same SES as their white counterparts. These findings led the author to suggest that buffers against psychological distress exist and function within cultural mechanisms and that religious attendance and strong social relationships may be important factors.	C (US studies)
Sarason et al (1997)	TLR	Demographic variables likely controlled for in population studies.	Reviews research evidence on associations between personal relationships and health Outcomes	This review reports findings from population studies and previous meta-analyses, which reported inverse relationships between social support and morbidity and mortality outcomes. These studies found that people with satisfying levels of support seem to cope better with stress, are healthier, recover from illness more quickly and are better adjusted. The authors recommend research into the contributions of positive and negative qualities of close relationships and the meaningfulness of these relationships.	TLR (studies reportedly used from range of countries, B)
Southwick et al (2005)	TLR	SES controlled, mixed age/ gender, ethnicity not stated.	Reviews evidence on psychosocial and biological factors involved in resilience to stress and identifies implications for prevention and	2 studies cited of relevance; 1 demonstrates a relationship between good social support and positive mental/ physical health outcomes, the other suggests that active coping skills are associated with improved circumstances among at risk children. Calls for research into neurological, genetic factors, developmental influences involved in stress resilience and recommends cognitive behavioural therapies and interventions to	TLR (US based likely)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
			treatment.	enrich social networks.	
Stewart et al (1997)	TLR	Low income, youth, mixed ethnicity/ gender	Reviews evidence on resilience factors in disadvantaged youth.	This review provides evidence on individual level, family level and community level protective factors. <u>Individual level factors include;</u> self esteem, optimism, control, easy going temperament, social competence, intelligence and cognitive and coping skills <u>Family level factors include;</u> strong parent-child relationships and extended kin networks, <u>Community level factors include;</u> opportunities for participation and positive school experiences, as influenced by opportunities for student participation in school life and supportive student-teacher relations. The authors also call for longitudinal studies to clarify processes of resilience, studies of health related outcomes of resilience and more extensive empirical evaluation of resilience programs. With regard to interventions the authors recommend support interventions which are focused on the child's environment and which develop social competence and skills.	TLR (Likely US based).
Szalacha et al (2003)	TLR	Minority ethnic groups, mostly low income, other characteristics not stated.	Reviews evidence on factors which mediate and moderate the effects of discrimination and contribute to resilience.	This review provides evidence on the mediators and moderators of the effects of discrimination. <u>Mediators identified include</u> internalisation of negative feedback and stress of exposure <u>Moderators identified include</u> cognitive development, understanding of power structures, external attribution, ethnic pride and bi-culturalism. The authors call for further research into the vulnerability/ protective factors of poverty, racism, cultural values, ethnic identity and biculturalism.	
Szanton, S	Weak systematic	SES controlled, mid to old age,	Reviews evidence on relationship	In this review all 4 studies which specifically addressed the relationship between allostatic load and SES found	C (US based)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
(2005)	review of 11 non-intervention (quantitative) studies. Level: 3 Review Quality: - <i>No studies: 11</i>	mixed gender, ethnicity not stated.	between allostatic load and SES, including moderators of this relationship.	an inverse relationship. Of relevance to this review 1 study using longitudinal data found that positive relationships with parents/ spouse were protective against high allostatic load scores even in the context of low income, but that high income was protective against high allostatic load scores despite negative parental or spousal relationships. For future research the authors recommend incorporating neighbourhood level data and individual data for SES indicators, and analysis of allostatic load by race/ ethnicity through the use of multi-ethnic, mixed SES samples.	
Taylor et al (2002)	TLR	Low income, minority ethnic adolescents, mixed gender	Reviews research into the psychological adjustment of urban inner city minority ethnic adolescents.	In this review evidence is provided which suggests that some of the effects of economic distress are offset by adolescent personal attributes and the social support made available to families from kinship networks. The authors suggest a need for more process oriented work on the links between risk and functioning, research on the connection between health and family functioning, and research on the links between culture and adolescent adjustment (ie sources of strength/ stress). With regard to interventions the authors recommend family centred programs which take into account the links between neighbourhood characteristics, family environment, social networks and adjustments. The authors also recommend creating and supporting mechanisms in the community which facilitate access to social support, and that interventions should make use of culturally indigenous structures and patterns of relations. In addition, the authors call for greater attention to macro-structural influences such as unemployment and	TLR (US based likely)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				discrimination and they suggest that social support has its limits	
Taylor et al (2000)	TLR	Low income African American adolescents, mixed gender.	Reviews evidence on the ecological correlates of the social and emotional adjustment of African American Adolescents	<p>This review provides evidence on the positive effects of family and community factors on adjustment. <u>Family factors include:</u> supportive environment, high expectations and motivation, authoritative parenting and strong parental supervision and monitoring. <u>Community factors include:</u> peer effects, teacher expectations and neighbourhood effects.</p> <p>The review also provides some evidence on the processes and contexts underlying adaptation with respect to this group. The authors cite the ethnographic findings of Ogbu (1986), that African-American students experiencing feelings of alienation and isolation from social and economic mainstream often reject academic achievement as it is seen as irrelevant to success within their own community and has come to be seen as 'acting white'. They also cite the findings of another ethnographic study where it was observed that the more that adolescents perceive that their resources are scarce and their options limited, the more likely they are to make risky decisions with long term negative consequences, or embrace a "subculture of disengagement from wider society".</p> <p>The authors propose a need to see adaptation in the context of interactions which lead to adaptive responses. They also highlight a lack of research on this group and call for more research on African Americans, greater attention to the cultural contexts for behaviours and research into how families negotiate positive and negative aspects of environment and the interactions that take between person and context.</p>	TLR (US based groups; C)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Taylor & Seeman (1999)	TLR	SES controlled, gender, age, ethnicity not stated.	Psychosocial resources and the SES-Health Relationship	Only 1 study used in this review is relevant to the topic area. This study found that strong control beliefs can moderate the effect of disadvantage on health outcomes. The remainder of studies in the review are exploring psychosocial mediators of the relationship between disadvantage and poor health outcomes. The authors conclude that psycho-social resources (control, social relationships and coping) are potentially important mediators of SES disparities on health and longevity. They recommend further research into the ways in which coping strategies are affected by or reflect SES.	TLR (results from range of countries reported)
Villenas & Dehyle (1999)	TLR	Low income Latino families	Reviews ethnographic findings of research into Latino families, schooling, resilience and resistance, and is discussed from a Critical Race Theory perspective.	<p>This review provides evidence on the strengths in Latino culture and the role of a positive ethnic identity, as factors which enable them to survive adversity and racism. Drawing on the findings of ethnographic studies the authors observe and describe several key themes. A first theme which is described is a process of individual and community empowerment, which takes place through collective action and engagement with the education system. The authors suggest this to be the only route through which marginalised communities can hope to achieve change.</p> <p>Another observation is how communities, families and individuals resist castification by claiming their culture and language and creating counter-hegemonic narratives of dignity and ethnic pride which translate into a base that promotes social, cultural and economic activities whereby immigrant children and adults are able to survive the psychological and often physical violence of an anti-immigrant xenophobic nation.'</p> <p>This review also highlights that rather than simply not</p>	TLR (US based; C)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				<p>caring about education (a dominant view), Latino families have different meanings that are attached to the idea of education. The authors explain; the “goal of Latino educational success is linked to goals of self-determination, linguistic and cultural human rights, and the right to a history and education based on community-identified terms.”.</p> <p>The authors strongly argue for schools to be more accommodative of the experiences and backgrounds of marginalised students and families and they recommend further research into the role of schools in undermining and fostering resilience.</p>	
Wallace, J (1999)	TLR	Mixed income studies, minority ethnic groups, gender/ age not stated.	Reviews evidence on ecological factors associated with addiction, race, risk and resilience	<p>This review provides evidence that substance related problems impact black and Hispanic young adults disproportionately, but that ethnic identity may be a protective mechanism against substance abuse.</p> <p>The review cites findings that greater involvement in black social networks and higher levels of black awareness predicted lower alcohol use among black people (no other characteristics provided). It also reports on the conservative drinking norms found in cohesive black and hispanic communities. These findings are interpreted to suggest the protective influence of connectedness and traditional cultural norms. The increased religiosity of minority ethnic groups is also suggested to have a positive effect.</p> <p>The authors recommend increased accounting for SES in research on racial/ ethnic disparities and research on the role of racial/ ethnic identity as protective factor.</p>	TLR (US base likely)
Wandersm	TLR	Low income	Reviews evidence	This review provides evidence on family and community	TLR (US based)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
an & Nation (1998)		neighbourhoods	on factors which protect against the negative effects of poverty in disadvantaged neighbourhoods.	<p>factors which protect against the negative effects of poverty in disadvantaged neighbourhoods.</p> <p><u>Family factors identified include:</u> strong child-adult relationship.</p> <p><u>Community factors identified include:</u> strong social network which provides emotional support and contributes to collective efficacy. The authors cite the findings of one study that collective efficacy, defined as the willingness of residents to intervene for the common good explained much of the relationship between neighbourhood characteristics and violence.</p> <p>Limited evidence on school factors is also provided, with supportive student-teacher relationships suggested as important factors which promote resilience. The authors recommend social support interventions at the community level.</p>	likely)
Wang et al (1999)	TLR (but draws on previous meta-analysis)	Low income, youth, mixed ethnicity/ gender	Reviews evidence on psychological and educational resilience	<p>This review provides evidence on individual level, family level, community level and school factors that foster competence among high risk children.</p> <p><u>Individual level factors include:</u> social skills and cognitive skills and processes.</p> <p><u>Family level factors include:</u> strong parent-child relationships and environments which nurture motivation, high expectations, achievement, participation in family life, as well as structured parenting and resource availability.</p> <p><u>Community level factors include:</u> supportive relationships, pro-education cultural norms, local services and opportunities for participation in the community</p> <p><u>School factors include:</u></p> <p>-Classroom practices such as high expectations, role</p>	TLR (US based likey)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				<p>modelling, positive relationships with students, effective instructional methods, opportunities for student engagement and interaction with teachers, individually tailored instruction for each student, participation in group learning activities and the curriculum.</p> <p>-School climate; a school culture which reinforces accomplishments, which emphasises involvement, belonging and student engagement in school life, and which promotes positive social interactions among peers and with adults.</p> <p>The authors call for trials and evaluations of interventions, multivariate studies to investigate sets of potential influences simultaneously and case studies of demonstrably resilient children to highlight processes and mechanisms of resilience. With regard to interventions and approaches the authors recommend that school and community services should provide more integrated networks of resources and protective mechanisms for children and families.</p>	
Wang et al (1997)	TLR (but draws on previous meta-analysis)	Low income, youth, mixed ethnicity/ gender	Reviews evidence on factors promoting educational resilience and discusses implications for fostering educational resilience in Inner-City Schools	<p>This review reports on results from a previous meta analysis and identifies protective factors at the individual, family, community and school level</p> <p><u>Individual level factors include:</u> social skills and cognitive skills and processes.</p> <p><u>Family level factors include:</u> strong parent-child relationships and environments which nurture motivation, high expectations, achievement, participation in family life, as well as structured parenting and resource availability.</p> <p><u>Community level factors include:</u> supportive relationships, pro-education cultural norms, local</p>	TLR (US based likely)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				<p>services and opportunities for participation in the community</p> <p><u>School factors include:</u></p> <ul style="list-style-type: none"> -Classroom practices such as high expectations, role modelling, positive relationships with students, effective instructional methods, opportunities for student engagement and interaction with teachers, individually tailored instruction for each student, participation in group learning activities and the curriculum. -School climate; a school culture which reinforces accomplishments, which emphasises involvement, belonging and student engagement in school life, and which promotes positive social interactions among peers and with adults. <p>The authors conclude that positive school environments and practices can enhance student resilience. The recommend inclusive school approaches and the implementation of family-school- community partnerships.</p>	
Waxman et al. (2003)	TLR	Low income, youth, mixed gender/ ethnicity.	Review of research on educational resilience: research report.	This review provides evidence that learning environment, classroom instruction and motivational aspects differ significantly between resilient and non resilient students. Instructional practices and classroom learning environments are suggested to be contributing factors. The authors recommend mixed method, ethnographic research which can help explain factors that impact resilient and non resilient students, and which can identify processes that promote protective mechanisms in classrooms. For teaching and school approaches student centred models of classroom instruction are recommended.	TLR (US based likely)
Werner, E	TLR	Low income,	Reviews	This review provides evidence drawn from the findings of	TLR (US based

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
(2000)		children and young people, mixed gender/ethnicity.	longitudinal evidence on protective factors and individual resilience	<p>2 or more longitudinal studies on individual level, family level, community level and school level factors promoting resilience.</p> <p><u>Individual level factors include</u>; control, planning, positive self concept, religious beliefs, strong achievement motivation, easy going temperament.</p> <p>Some evidence is also provided on pathways.</p> <p>Reporting on findings from the Kauai longitudinal study (Werner, 1993), it is described how continuities and links were observed in the study data between individual level protective factors and successful adaptation in high-risk children and youths. These continuities led the researcher to conclude that individual dispositions led resilient children to select or construct environments that, in turn, reinforced and sustained their active, outgoing dispositions and that rewarded their competencies.</p> <p><u>Family level factors include</u>; strong parent-child relationships, extended kin networks, mothers education and small family size.</p> <p>Evidence is also reported to suggest than an emphasis on autonomy with emotional support from the primary caregiver is more effective for girls, whilst for boys an emphasis on structure and rules is more effective),</p> <p><u>Community factors include</u>; (eg positive and supportive relationships)</p> <p><u>School factors</u>; high teacher expectations.</p> <p>The author concludes that competence, confidence and caring can flourish under adverse circumstances provided that there are secure and caring relationships. The author calls for research in developing countries, developing cross cultural perspectives and research into causal relationship hypotheses.</p>	likely)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Williams et al (2003)	Weak systematic review of non-intervention (quantitative) studies. Level: 3 Review quality: - <i>No studies: 53</i>	Minority ethnic groups.	Reviews evidence from community studies on the relationship between racial/ethnic discrimination and health.	In this review findings from 5 studies were relevant to this topic area. These findings suggest racial consciousness as a protective factor. The authors suggest that beliefs about ones self and the environment are individual factors that might affect appraisals of stress and that racial consciousness and identity might function in this way for race-related stressors. The overall conclusion of the review was that discrimination associated with poorer health across a broad range of outcomes and across socially disadvantaged groups in different societies	C (US studies)
Wolkow & Ferguson (2001)	TLR	Low income children/adolescents, ethnicity/gender not stated.	Reviews evidence on community factors in the development of resilience, and considers issues and implications for future directions	This review provides evidence which suggests that good positive relationships with an adult in the community act as a buffer to the affects of hardship. The authors suggest a need to proceed from the identification of protective influences to research which studies the generation of protective processes. They recommend interventions which foster social support in disadvantaged communities.	
Yoshikawa & Seidman (2000)	TLR	Low income, adolescents, ethnicity/gender mixed.	Reviews evidence on competence among urban adolescents in poverty.	This review provides evidence on individual level, family level and community level protective factors. <u>Individual level factors include;</u> positive ethnic identity and racial consciousness, although it was also suggested that this may increase vulnerability if there is no perception of opportunities to overcome oppression. <u>Family factors identified include;</u> supportive family environment, authoritative parenting, strong parental	TLR (US based likely)

Evidence on protective factors.					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				<p>supervision and monitoring and processes of ethnic socialization.</p> <p>Community factors include: connectedness; here, ethnographic research on immigrant neighbourhoods was cited which suggested the importance of Vietnamese and Cuban community organisations in contributing to strong identity and the mobility and academic success of people within those communities. Evidence was also provided which suggests the protective effects of peers with positive attitudes towards education.</p> <p>Evidence was also cited which suggests that severity of deprivation will impact upon community networks and cohesiveness.</p> <p>Overall the authors suggest the complexity of these issues and comment on a lack of research investigating mechanisms. For future research the authors recommend idiographic approaches, better appreciation of diversity and the multiple forms and contexts for competence in measurement, as well as to explore effects of anti-poverty policies on competence outcomes</p>	

4.2. What evidence is there on the processes and mechanisms underlying adaptation and coping ?

Evidence on processes and mechanisms					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Gonzales	TLR (evidence	Low income,	Reviews evidence	This review provides some evidence on protective	TLR

Evidence on processes and mechanisms					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
& Kim (1997)	for this question is TLR; systematic searches used for evidence on effectiveness).	minority ethnic groups, children and teenagers, mixed gender.	on factors contributing to the stress and coping of ethnic minority groups, with particular attention to evidence on the cultural ecologies of these groups. The review also reviews coping interventions which are discussed in the tables for Q5.	<p>factors and adaptive processes and responses relating to minority ethnic groups. Family level protective factors included; parent-child relationships, warm family environments, processes of ethnic socialization and extended family Kinship networks. Evidence was also cited which suggest racial identity and religion as protective factors, along with findings which suggest that locus of control may not contribute to resilience among black students (whereas this is often a commonly cited protective factor for other groups).</p> <p>With regard to adaptive processes, the review authors cited the ethnographic findings of Ogbu (1986), that African-American students experiencing feelings of alienation and isolation from social and economic mainstream often reject academic achievement as it is seen as irrelevant to success within their own community and has come to be seen as 'acting white'. The authors suggest that these responses may be 'adaptive' in so far as they may help protect a sense of self in a context of damaging ethnic stereotypes.</p> <p>The authors conclude that a lack of attention has been paid to the contexts in which coping occurs for these groups and they stress the importance of considering contextual/ cultural influences on adaptive responses.</p>	(Likely US based)
McDermott & Graham (2005)	Weak quality systematic review of non-intervention studies, (qualitative research).	Low income, white mothers under the age of 25.	Reviews qualitative research on the mothering practices of 'resilient young mother'	This review provides evidence on how young mothers draw on limited and constrained resources to negotiate best possible identities, relationships and mothering practices in the face of poverty and stigma. The synthesis highlights the difficulties that young mothers experience in constructing a positive identity due to their	A (UK studies)

Evidence on processes and mechanisms					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
	<p><i>Level: 3</i></p> <p><i>Review Quality: -</i></p> <p>No. Studies: 20</p>			<p>positioning as 'unsuitable mothers', but also how they resist their positioning as an unfit mother by investing in the 'good' mother identity. Kinship ties are also identified as a crucial source of support. The authors highlight a dearth of UK based literature, and for future research suggest using young black mothers as a comparative group and also including studies from other post modern societies.</p>	
<p>Nettles & Pleck (1996)</p>	<p>TLR</p>	<p>Black adolescents in US.</p>	<p>Reviews research evidence on risk, resilience and development among black adolescents in the US, with reference to an ecological framework.</p>	<p>This review provides evidence on individual, family and community level factors that contribute to the resilience of black youths.</p> <p><u>Individual level factors include:</u> high educational expectations and strong achievement motivation. In contrast with much other evidence on protective factors the review also pointed to evidence which suggests that self esteem may not account for generally poorer performance of black students and that locus of control may not contribute to resilience among black students. Evidence was also cited which suggests that racial or ethnic consciousness may protect against the impact of racism/ discrimination, but also that oppositional social identities, characterised by responses to racism can be a source of vulnerability in a school setting. However, 'race-less' identities associated with educational resilience may put black students at risk of poor social development.</p> <p><u>Family level factors identified include:</u> nurturing and supportive care-giving, structured and authoritative parenting, strong parental supervision and monitoring and ethnic socialization.</p> <p><u>Community factors include:</u> social networks and social support.</p> <p>Evidence was also provided on the positive effects of</p>	<p>TLR US based (C)</p>

Evidence on processes and mechanisms					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				<p>religious involvement and the effects that school approaches can have on outcomes among students.</p> <p>With regard to adaptive 'processes' this review cited the ethnographic findings of Ogbu (1986), that African-American students experiencing feelings of alienation and isolation from social and economic mainstream often reject academic achievement as it is seen as irrelevant to success within their own community and has come to be seen as 'acting white'</p> <p>The authors call for analysis which differentiates by gender and SES, for research into community resilience and for research into out of school contexts of behaviours. With regard to interventions they suggest that resilience could be fostered through development of psychosocial components: knowledge, management skills and personal meaning.</p>	
Pincus and Friedman (2004)	TLR	SES controlled in some studies, children, ethnicity/ gender not stated.	Reviews evidence on Children's coping with everyday stress and makes recommendations for school based prevention programs.	This review provides evidence from studies across diverse age groups, socio-economic groups and clinical samples, which suggest that children who have better problem-solving skills are better adjusted. The review also cites pieces of evidence which suggest the context dependency of coping responses, and that appraisals of controllability influence coping responses. Evidence is also cited which suggests that the use of multiple coping responses (emotion and problem) is a predictor of psychological adjustment, although no information was provided on how these relate to different socio-economic groups. With regard to interventions the authors suggest a need for programs which include problem solving and emotion focused coping skills components.	TLR (US based likely)
Roesch et	TLR	SES and gender	Provides an	This review provides evidence which suggests that	TLR (Likely US)

Evidence on processes and mechanisms					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
al (2002)		not stated, mostly white, mixed age groups.	overview of the cognitive approaches used to study stress and coping and focuses on empirical research in this area.	negative appraisals lead to negative psychological adjustment, whereas positive appraisals are associated with positive psychological and physical adjustment. It also provides evidence on the role of attributions; findings are reported which suggest that perceptions of controllability are linked to active coping methods. The authors recommend that future research should look at the coping of individuals from various ethnic groups and cultures.	based)
Taylor et al (2000)	TLR	Low income African American adolescents, mixed gender.	Reviews evidence on the ecological correlates of the social and emotional adjustment of African American Adolescents	This review provides evidence on the positive effects of family and community factors on adjustment. <u>Family factors include:</u> supportive environment, high expectations and motivation, authoritative parenting and strong parental supervision and monitoring. <u>Community factors include:</u> peer effects, teacher expectations and neighbourhood effects. The review also provides some evidence on the processes and contexts underlying adaptation with respect to this group. The authors cite the ethnographic findings of Ogbu (1986), that African-American students experiencing feelings of alienation and isolation from social and economic mainstream often reject academic achievement as it is seen as irrelevant to success within their own community and has come to be seen as 'acting white'. They also cite the findings of another ethnographic study where it was observed that the more that adolescents perceive that their resources are scarce and their options limited, the more likely they are to make risky decisions with long term negative consequences, or embrace a "subculture of disengagement from wider society". The authors propose a need to see adaptation in the context of interactions which lead to adaptive responses.	TLR (US based groups; C)

Evidence on processes and mechanisms					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				They also highlight a lack of research on this group and call for more research on African Americans, greater attention to the cultural contexts for behaviours and research into how families negotiate positive and negative aspects of environment and the interactions that take between person and context.	
Villenas and Dehyle (1999)	TLR	Low income Latino families	Reviews ethnographic findings of research into Latino families, schooling, resilience and resistance, and is discussed from a Critical Race Theory perspective.	<p>This review provides evidence on the strengths in Latino culture and the role of a positive ethnic identity, as factors which enable them to survive adversity and racism. Drawing on the findings of ethnographic studies the authors observe and describe several key themes. A first theme which is described is a process of individual and community empowerment, which takes place through collective action and engagement with the education system. The authors suggest this to be the only route through which marginalised communities can hope to achieve change.</p> <p>Another observation is how communities, families and individuals resist castification by claiming their culture and language and creating “counter-hegemonic narratives of dignity and ethnic pride which translate into a base that promotes social, cultural and economic activities whereby immigrant children and adults are able to survive the psychological and often physical violence of an anti-immigrant xenophobic nation.”</p> <p>This review also highlights that rather than simply not caring about education (a dominant view), Latino families have different meanings that are attached to the idea of education. The authors explain; the “goal of Latino educational success is linked to goals of self-determination, linguistic and cultural human rights, and</p>	TLR (US based; C)

Evidence on processes and mechanisms					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				<p>the right to a history and education based on community-identified terms.”.</p> <p>The authors strongly argue for schools to be more accommodative of the experiences and backgrounds of marginalised students and families and they recommend further research into the role of schools in undermining and fostering resilience.</p>	

Evidence Tables for Question Five; What evidence is there on the effectiveness of interventions engaged in generating contexts and resources which might facilitate coping, resilience and positive development among disadvantaged groups?

Intervention studies used for Q5					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
Dubois et al (2002)	<p>Weak quality meta-analysis of RCT and Non RCT studies</p> <p>Level: 1 + 2</p> <p>Review quality: -</p> <p><i>No studies:</i></p>	<p>Majority non white (n=26), majority white (n=15)</p> <p>22 studies of low SES groups, mixed gender, children and adolescents.</p> <p>Participants (30 studies;</p>	<p>Review and meta-analysis of the effectiveness of mentoring programs</p>	<p>The programs involved 1-1 mentoring by an older adult on populations under the age of 19. The studies reviewed all had controlled or pre-program/ post-program designs and the outcomes used to measure effectiveness included emotional/psychological measures, measures of problem-high risk behaviour, and social competence, academic and career related measures. The results of the meta-analysis provide support for the effectiveness of youth mentoring programs. Relatively small effect sizes (0.14 and 0.18) were reported, although there was considerable heterogeneity in effect sizes. The 95% confidence interval for both fixed and random effects encompassed a lower value of .05 and an upper value of .24</p>	C (US studies)

Intervention studies used for Q5					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
	59	n=<65, 29 studies; n=>65)		The strongest predictors were training for mentors, structured activities and expectations for frequency of contact. Mentoring programs were shown to offer the greatest potential for youth most at risk. The authors recommend further research into the relationship quality and circumstances where successful mentoring occurs. For policy and practice they recommend the continued implementation of mentoring programs established for youths from disadvantaged backgrounds, but in innovative ways and making use of experienced and successful mentors.	
Dysson et al (2002)	Good quality systematic review of descriptive case studies Level: 3 Review quality: + <i>No studies: 27</i>	School age, mixed SES/Gender/ Ethnicity.	Review studies which were concerned with school level responses to diversity and increasing the participation of all students in the culture, curricula and communities of their schools.	In spite of a rigorous search strategy no outcome evaluations studies were found and only case studies describing exemplary school approaches could be used. Due to the fact that no outcome evaluations were identified which could produce data on effectiveness, the significance of this systematic review therefore lies in the gaps which it identifies. The author therefore highlights an urgent need for methodologically sound studies which test the extent of the schools inclusivity, which draw on a wide range of evidence, which focus on outcomes for students, which trace links between action and participation in detail, and make comparisons between more- and less-inclusive schools.	A (UK studies used)
Gonzales and Kim (1997)	A weak systematic review of RCT and non-RCT interventions. Level: 1&2 Review	Low income, minority ethnic children and families, mixed gender.	Reviews evidence on factors contributing to the stress and coping of ethnic minority groups, with particular attention to evidence on cultural ecologies. Also reviews coping interventions which	This review evaluated the effects of 5 family based interventions which had been explicitly designed or modified to be used with specific ethnic groups, or were evaluated with a predominantly minority ethnic sample. Key program components included parenting skills and bonding. The studies used all had control comparison groups and the outcomes used to measure effectiveness included college attendance, behaviour problems, teenage pregnancy and social competence measures. Positive effects were reported on outcomes. The strongest evidence of effectiveness was provided by three	C (US studies used)

Intervention studies used for Q5					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
	<p>quality: -</p> <p>No studies: 8</p>		<p>have been specifically tailored or applied for ME groups</p>	<p>early intervention parenting programs that have targeted low-income mothers of infants in high-risk settings. Impressive effects are reported to be demonstrated into childhood and early adulthood. These programs involved 2 year intensive efforts. Shorter duration programs demonstrated more modest effects and are reported to require continued follow up.</p> <p>This review also evaluated the effects of 3 child focused coping skills interventions which had been explicitly designed or modified to be used with specific ethnic groups, or were evaluated with a predominantly minority ethnic sample. The studies used all had control comparison groups and the outcomes used to measure effectiveness included college attendance, behaviour problems, teenage pregnancy and social competence measures. This review found firstly that few coping interventions have targeted mental health or general well being for minority children. Secondly, of those that have, program effects have only been demonstrated for at most one year follow up and demonstrated gains have been modest. However, the author concludes that the results do lend some support for the use of coping interventions. The author recommends that future evaluations should include larger and more varied samples and randomized designs, which were not used in some cases</p> <p>No statistical data was provided.</p>	
Harden et al (2006)	<p>A very strong meta-analysis of RCT and Non RCT evaluations.</p> <p>Level: 1&2</p>		<p>A meta-analysis of 10 evaluations of interventions which have targeted social exclusion to prevent unintended teenage pregnancy.</p>	<p>Two categories of interventions were reviewed: early childhood interventions (pre-school and primary school) and youth development programmes (11-18). Both types of interventions had components aimed at enhancing cognitive and social skills. The studies reviewed all had control or comparison groups and the outcomes used to measure effectiveness included pregnancy rates, academic</p>	<p>C (US based studies)</p>

Intervention studies used for Q5					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
	<p>Review quality: ++</p> <p>No. Reviews: 10</p>			<p>achievement, employment, attitudes to school. The review found that early childhood interventions and youth development programmes which promote healthy relationships and engagement with learning and ambition, through cognitive and social skills components, can lower teenage pregnancy rates by 39 per cent. Although effects for young men were not statistically significant, they were also reported to occur in the same positive direction.</p> <p>The author concludes that interventions which promote academic and social skills should complement, rather than replace, high quality sex education and contraceptive services, and should be accompanied by evaluation of their impact. There should also implementation of wider measures to tackle social disadvantage and poverty as a route to lowering teenage pregnancy rates.</p>	
MacLeod & Nelson (2000).	<p>A Strong systematic review and meta-analysis (RCT and non-RCT)</p> <p>Level: 1&2</p> <p>Review quality: +</p> <p>No Studies: 56</p>	Low income, at-risk families, mostly black studies (n=18), mostly white studies (n=11), mixed (n=12), mixed gender.	A meta-analysis of programs designed to promote family wellness and prevent child maltreatment.	Two types of programs were identified: pro-active 'wellness' interventions and re-active interventions responding to cases of child maltreatment. Both types of interventions were split according to their components, which the reviewer categorised as; home-visiting, multi-component (family support, pre-school education, child-care and community development) and social support/ mutual aid programs. The studies reviewed all had prospective controlled designs and the outcomes used to measure effectiveness included: out of home placement rates, direct/ proxy measures of maltreatment, measures of parent attitudes, observations of parent behaviour and measures of the home environment. A total mean weighted effect size of .41 was reported for both types of interventions, meaning that outcomes for the intervention group exceed 66% of those in control/ comparison groups. The highest effect sizes were observed for Intensive Family Preservation (reactive)	C (US studies)

Intervention studies used for Q5					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				<p>programs with high levels of participant involvement, an empowerment/ strengths-based approach, and a component of social support. The second highest effect sizes were observed for multi-component (proactive) 'ecological' interventions, suggesting the value of such approaches for the healthy development of at-risk families in general. The author recommends further research into the protective influences generated through proactive interventions, including which influences are the most effective, as well as increased use of follow up assessments and the examination of more general outcomes of family wellness. For policy makers and practitioners the author recommends a greater emphasis on pro-active rather than re-active interventions, as well as policies which work towards the reduction of poverty, as a priority.</p>	
McGrath et al (2006)	<p>A good quality systematic review of existing systematic reviews (RCT and non RCT)</p> <p>Level: 1&2</p> <p>Review Quality: +</p> <p>No Studies: 7</p>	1 review 'at risk groups', 1 review; native American youth, young people, mixed gender.	A review of existing systematic reviews on drug use prevention among young people.	<p>Only 2 out of the 7 reviews described the social backgrounds of participants. Both of these reviews considered 'skills' programs. One of these reviews explored the characteristics of effective school-based substance abuse prevention, including cognitive behaviour programs. The other review considered drug prevention strategies for minority (Native American) youth. The program components in individual approaches involved skills training and 'bicultural competence' interventions which taught adolescents coping skills for negotiating between mainstream and native cultures to increase a sense of self-efficacy in both cultures.</p> <p>For the 2 reviews which reported background characteristics some positive findings were provided: In the review of the characteristics of effective school-based substance abuse prevention programs, it was reported that cognitive behaviour programmes offer the greater chance of success for at risk</p>	C (US studies)

Intervention studies used for Q5					
Author and date	Review type and quality	Study population	Review objective	Main results	Applicability to UK
				<p>populations. However, it was also reported that the number of included prevention programmes for at-risk populations is small and therefore the strength of evidence weak. In the review of strategies for Native American youth it was reported that incorporating bicultural competence approaches to skills training has been shown to be effective for reducing prevalence of drug use in Native American youth.</p> <p>The authors suggest that adding bicultural approaches to skills training for some populations of minority youth in the UK may be useful, as this should increase the cultural sensitivity of the programme and should make the programme more meaningful for participants. Overall, though, the authors comments that a lack of methodologically sound evidence means it is difficult to conclude 'what works' in drug prevention among young people.</p>	

APPENDICES

Appendix 1: Background references

Antonovsky (1979) *Health, Stress and Coping*, London, Josey Bass.

Jepson et al (2006) Review of the effectiveness of interventions, approaches and models at individual, community and population level that are aimed at changing health outcomes through changing knowledge, attitudes and behaviour, NICE.

NICE (2006) *Methods for development of NICE public health guidance*.

Swann, C, Naidoo, B & Kelly, M (2006) Evidence for public health practice: conceptual and methodological challenges. In A Killoran, C Swann & M Kelly (eds) (2006) *Public Health Evidence: Tackling health inequalities*. Oxford: Oxford University Press.

Appendix 2: Search strategies

We pursued a strategy of searching within titles and abstracts, using a combination of key words and subject headings.

The following key words were used and were combined with subject headings specific to each database. The words in each set were combined using OR and the two sets were combined using AND (see appendix 2 for example strategy):

Set 1 (resilience/ coping terms)

Coping, capability, positive (adaptation or adjustment or development), salutogenesis/ salutogenic or resilience, resilient, self efficacy, self esteem, sense of coherence, self concept, “comprehensibility, meaningfulness and manageability”, life orientation

Set 2 (influences terms)

Empowerment, stressful/distressful events/circumstances/ situation/ factor , salutogenesis/salutogenic, adversity/hardship/suffering, family (life, setting, background, context, structure, factor), health assets, collective efficacy, protective (factors/circumstances/events/mechanisms/ processes/experiences), health settings, social (network/ ties/ cohesion / support /capital /skill/ influence/competence), vulnerable/disadvantaged/risk (people/person/community /individual/ group/ population) resource factor* , life-course, community (development /involvement/engagement/ network /partnership/ regeneration/setting/context), school (context/ setting/ approach/environment), education (setting/place/centre/environment/context/approach), general resistance resources.

A. Example of search using Ovid interface.

#	Search History-Psychinfo final	Results	Display
1	review.ti,ab.	93172	 DISPLAY
2	pt=review.mp. [mp=title, abstract, subject headings, table of contents, key concepts]	0	-
3	pt=review.mp. [mp=title, abstract, subject headings, table of contents, key concepts]	0	-
4	(meta adj (analysis or analyses)).ti,ab.	5886	 DISPLAY
5	(metaanalysis or metaanalyses).ti,ab.	138	 DISPLAY
6	pt=meta-analysis.mp. [mp=title, abstract, subject headings, table of contents, key concepts]	0	-
7	synthes\$.ti,ab.	14702	 DISPLAY
8	metasynthes\$.ti,ab.	15	 DISPLAY
9	(meta adj analytic).ti,ab.	1712	 DISPLAY
10	(empirical adj (literature or study or studies	13027	

	or evidence)).ti,ab.		 DISPLAY
11	systematic.ti,ab.	25836	 DISPLAY
12	overview\$.ti,ab.	24988	 DISPLAY
13	(what adj works).ti,ab.	12502	 DISPLAY
14	(scoping adj (study or studies)).ti,ab.	8	 DISPLAY
15	exp "LITERATURE REVIEW"/	22361	 DISPLAY
16	exp Meta Analysis/	2683	 DISPLAY
17	exp COPING BEHAVIOR/	24585	 DISPLAY
18	exp "RESILIENCE (PSYCHOLOGICAL)"/	1934	 DISPLAY
19	exp Adaptive Behavior/	1034	 DISPLAY
20	exp "ADAPTABILITY (PERSONALITY)"/	811	 DISPLAY
21	exp Self Concept/	41065	 DISPLAY
22	self esteem/	15039	 DISPLAY
23	self efficacy/	7240	 DISPLAY
24	(positive adj1 (adaptation or development or adjustment)).ti,ab.	997	 DISPLAY
25	(resilience or resilient).ti,ab.	3645	 DISPLAY
26	(salutogenesis or salutogenic).ti,ab.	163	 DISPLAY
27	((self adj1 concept) or (self adj esteem)).ti,ab.	35711	 DISPLAY
28	Capability.ti,ab.	2894	 DISPLAY
29	(coping adj1 (behaviour or behavior or strateg\$ or technique\$ or personality or character\$ or resource\$)).ti,ab.	10764	 DISPLAY
30	(sense adj1 coherence).ti,ab.	699	 DISPLAY

31	(self adj1 efficacy).ti,ab.	10232	 DISPLAY
32	(comprehensibility and meaningfulness and manageability).ti,ab.	40	 DISPLAY
33	(life adj orientation).ti,ab.	334	 DISPLAY
34	exp FAMILY BACKGROUND/ or exp FAMILY/ or exp FAMILY STRUCTURE/ or exp FAMILY RELATIONS/	103147	 DISPLAY
35	life experiences/	9684	 DISPLAY
36	risk factors/ or at risk populations/	27525	 DISPLAY
37	social capital/	410	 DISPLAY
38	exp Social Support/	17297	 DISPLAY
39	exp Group Cohesion/	1487	 DISPLAY
40	exp Social Networks/	2154	 DISPLAY
41	exp Social Influences/	31516	 DISPLAY
42	exp Social Skills/	7274	 DISPLAY
43	((stressful or distressful) adj1 (event\$ or circumstance\$ or situation\$ or factor\$)).ti,ab.	3520	 DISPLAY
44	(adversity or hardship or suffering).ti,ab.	18784	 DISPLAY
45	(health adj1 asset\$).ti,ab.	68	 DISPLAY
46	(family adj (background or setting\$ or life or context or structure or factor\$)).ti,ab.	11292	 DISPLAY
47	(collective adj1 efficacy).ti,ab.	223	 DISPLAY
48	communities/ or neighborhoods/ or community development/ or community involvement/	8479	 DISPLAY
49	(protective adj (factor\$ or circumstance\$ or event\$ or process\$ or mechanism\$ or experience\$)).ti,ab.	2862	 DISPLAY
50	(social adj1 (network\$ or ties or cohesion or	39509	

	support or capital or skill\$ or influence\$ or competence)).ti,ab.		DISPLAY
51	(health\$ adj2 settings).mp. [mp=title, abstract, subject headings, table of contents, key concepts]	1729	 DISPLAY
52	empowerment.mp. or exp EMPOWERMENT/	4986	 DISPLAY
53	(community adj1 first).ti,ab.	87	 DISPLAY
54	(sure adj1 start).ti,ab.	16	 DISPLAY
55	((vulnerable or disadvantaged or risk) adj (people or person\$ or communit\$ or individual\$ or group\$ or population\$)).ti,ab.	5279	 DISPLAY
56	(triangle adj1 project).ti,ab.	2	 DISPLAY
57	(resource adj1 factor\$).ti,ab.	75	 DISPLAY
58	life?course.ti,ab.	84	 DISPLAY
59	(communit\$ adj (development or involvement or engagement or network\$ or partnership\$ or regeneration or setting\$ or context\$)).ti,ab.	3322	 DISPLAY
60	(school adj1 (context\$ or setting\$ or approach\$ or environment\$)).ti,ab.	6075	 DISPLAY
61	"learning centers (educational)"/ or learning environment/	854	 DISPLAY
62	school environment/	6006	 DISPLAY
63	(education\$ adj (setting\$ or place\$ or centre\$ or environment\$ or context\$ or approach\$)).ti,ab.	4660	 DISPLAY
64	(general adj resistance adj resource\$).mp.	2	 DISPLAY
65	or/34-64	258143	 DISPLAY
66	metaethics.mp. or (meta adj ethics).ti,ab. [mp=title, abstract, subject headings, table of contents, key concepts]	28	 DISPLAY
67	(metaevaluation\$ or (meta adj evaluation\$)).ti,ab.	45	 DISPLAY

68	(metaethnograph\$ or (meta adj ethnograph\$)).ti,ab.	12	 DISPLAY
69	(metaresearch or (meta adj research)).ti,ab.	3	 DISPLAY
70	(metasummar\$ or (meta adj summar\$)).ti,ab.	3	 DISPLAY
71	(metatheoretical or (meta adj theoretical)).ti,ab.	555	 DISPLAY
72	or/1-16	185940	 DISPLAY
73	or/66-72	186439	 DISPLAY
74	Salutogenesis.mp. or salutogenic.ti,ab. [mp=title, abstract, subject headings, table of contents, key concepts]	166	 DISPLAY
75	65 or 74	258252	 DISPLAY
76	or/17-33	99632	 DISPLAY
77	73 and 75 and 76	1853	 DISPLAY
78	limit 77 to (human and english language and yr="1990 - 2006")	1418	 DISPLAY
79	Personality Traits/	27739	 DISPLAY
80	Emotional Adjustment/	11270	 DISPLAY
81	76 or 79 or 80	132999	 DISPLAY
82	73 and 75 and 81	2256	 DISPLAY
83	limit 82 to (human and english language and yr="1990 - 2006")	1663	

Example of search strategy using CSA interface;

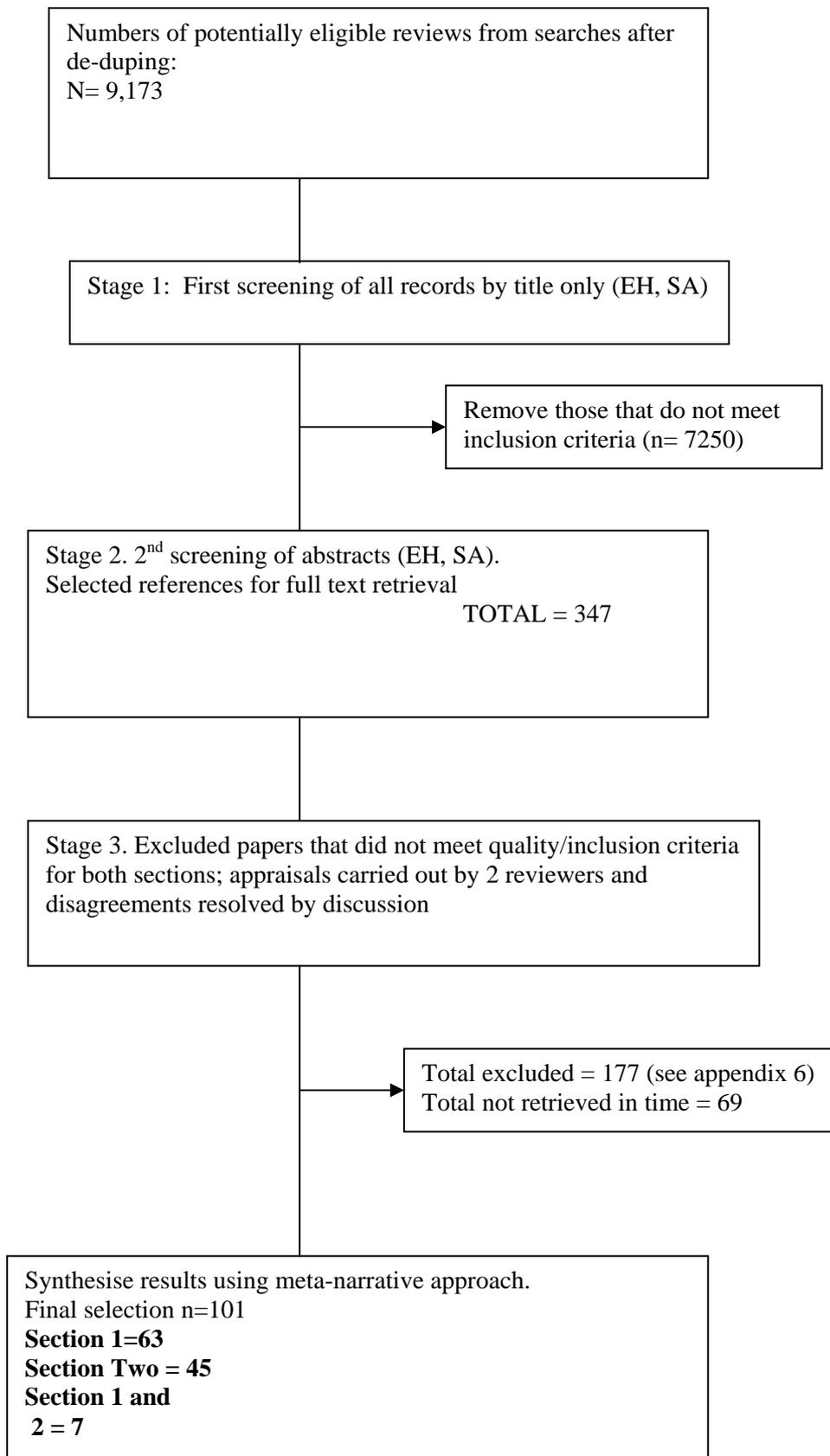
ASSIA

(DE= ("life events" or "life course" or "adult education" or "community education" or "schools" or "social influences" or "community action" or "community development" or "protective factors" or "social environment" or "social capital" or "social cohesion" or "interpersonal relationships" or "social competence" or "vulnerable people" or "vulnerability" or "families" or "adversity") or KW= ("empowerment" or ((stressful or distressful) within 1 (event* or circumstance* or situation* or factor*)) or "salutogenesis" or "salutogenic" or "adversity" or "hardship" or "suffering" or (famil\$

within 1 (life or setting* or background* or context* or structure* or factor*))or "health assets" or "collective efficacy" or "community development" or (protective within 1 (factors or circumstances or events or mechanisms or processes or experiences)) or "health* within 2 settings" or (social within 1 (network* or ties or cohesion or support or capital or skill* or influence* or competence)) or ((vulnerable or disadvantaged or risk) within 2 (people or person* or communit* or individual* or group* or population*)) or (triangle adj1 project) or (resource adj1 factor*) or life?course or (communit* adj (development or involvement or engagement or network* or partnership* or regeneration or setting* or context*)) or (school adj1 (context* or setting* or approach* or environment*)) or (education* adj (setting* or place* or centre* or environment* or context* or approach*)) or (general within 1 resistance within 1 resource*)) AND (DE=("self concept" or "sense of coherence" or "resilience" or "esteem" or "efficacy" or "adjustment" or "adaptation" or "empowerment" or "coping" or "capacity" or "capabilities") or KW= ("coping" or "capability" or (positive within 1 (adaptation or adjustment or development)) or "salutogenesis" or "salutogenic" or "resilience" or "resilient" or "self efficacy" or "self esteem" or "sense within 1 coherence" or "self concept" or (comprehensibility and meaningfulness and manageability) or (life within 1 orientation))) AND (DE=("meta analysis" or "systematic reviews" or "literature reviews" or "review articles")or KW=("review" or "meta analysis" or "synthes*" or "metasynth*" or (metaethics or (meta within 1 ethics))or (metaevaluation* or (meta within 1 evaluation*)) or ((metaethnograph* or (meta within 1 ethnograph*))or (metaresearch or (meta within 1 research)) or (metasummar* or (meta within 1 summar*)) or (metatheoretical or (meta within 1 theoretical)) or (meta within 1 analytic) or (empirical within 1 (literature or study or studies or evidence))or "overview*" or "summary" or (what within 1 works) or (scoping within 1 (study or studies)) or (meta within 1 (analysis or analyses))or (metaanalysis or metaanalyses))or TI=("systematic"))

= 109 hits.

Appendix 3: Flowchart of results



Appendix 4: References for included reviews

1. Antonovsky, A. 1998. The Sense of Coherence: An Historical and Future Perspective. In: McCubbin, H.I.E.T., Elizabeth A (Ed); Thompson, Anne I (Ed); Fromer, Julie E (Ed) ed. *Stress, Coping and Health in Families*. pp. coping, and health in families: Sense of coherence and resiliency.
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Appendix 6: Sample CAT used for Section Two literature.

Critical Appraisal Tool

1a. Authors

b. Year of Publication:

c. Title:

d. Source:

e. Form completed by: _____

date: _____

2. Relevance to topic			
Does this paper address your topic area? Unsure	Yes	No	
3. Selection Criteria			
a) Did the paper have a clearly focussed aim or research question? Consider whether the following are discussed:	Yes	No	Unsure
b. The population studied	Yes	No	Unsure
c. The interventions given	Yes	No	Unsure
d. The outcomes considered	Yes	No	Unsure
e. Inclusion & exclusion criteria	Yes	No	Unsure
f. Types of studies	Yes	No	Unsure
g) Did the paper consider inequalities?	Yes	No	Unsure
4. Sytematicity			
Do the reviewers include all			
a. Relevant databases searched	Yes	No	Unsure
b. Years searched	Yes	No	Unsure
c. Were references from bibliographies followed up?	Yes	No	Unsure
d. Were experts consulted	Yes	No	Unsure
e. Were grey literature searched	Yes	No	Unsure
f. Were search terms specified	Yes	No	Unsure
g. Is the search strategy adequate?	Yes	No	Unsure

h. Did the review include English language studies only?	Yes	No	Unsure
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5. Is it worth continuing? **Yes** **No**

Why/why not?

6. Quality			
a) Did the authors assess the quality (rigour) of the included studies? Consider whether the following are used:	Yes	No	Unsure
b. A rating system	Yes	No	Unsure
c. More than one assessor	Yes	No	Unsure
d) If study results have been combined, was it reasonable to do so? Consider whether the following are true:	Yes	No	Unsure
e. Are the results of included studies clearly displayed?	Yes	No	Unsure
f. Are the studies sufficiently similar in design?	Yes	No	Unsure
g. How were the variations between studies investigated? (Give details)			
h) Are there sufficient data to support conclusions?	Yes	No	Unsure
7. Relevance to UK			
a) Can the results be applied/are generalisable to a UK population/population group?	Yes	No	Unsure
b) Are there differences in health care provision with the UK?	Yes	No	Unsure
c) Is the paper focused on a particular target group (age, sex, population sub-group etc)?	Yes	No	Unsure
8. Accept for inclusion?	Yes	No	Refer to third party
9. Additional comments:			

Appendix 7: Data Extraction Tool

Data Extraction Tool	Ref ID (NICE use only?)
1. a) Data extracted by: Ref no:	b) Date of extraction:
<p>2. a) Describe the study:</p> <p>Systematic review (including at least one RCT) <input type="checkbox"/></p> <p>Systematic review (non RCT) <input type="checkbox"/></p> <p>Non systematic Empirical Review <input type="checkbox"/></p> <p>Non systematic Theoretical Review <input type="checkbox"/></p> <p>Other</p> <p>b) Types of studies reviewed</p> <p>Randomised controlled trial: Individual <input type="checkbox"/></p> <p>Randomised controlled trial: Cluster <input type="checkbox"/></p> <p>Quantitative Observational <input type="checkbox"/></p> <p>Qualitative Studies <input type="checkbox"/></p> <p>Other.....</p>	
<p>Review parameters (if applicable):</p> <p>Describe the search method:</p> <p>c) Databases/sources searched:</p> <p>d) Years searched:</p> <p>Study selection criteria:</p> <p>e) Inclusion:</p> <p>f) Exclusion:</p> <p>g) Number of studies:</p> <p>h) Number of participants included:</p> <p>i) Describe the method of analysis (meta-analysis/narrative synthesis etc):</p>	
<p>For Intervention Studies:</p> <p>c) Description of the Intervention:</p> <p>d) Description of the comparator(s):</p>	

e) Method/mode of delivery (e.g. peer education):

f) Providers/deliverers of the intervention:

g) Level of intervention:

- Individual
- Community
- Population

h) Outcomes⁶:(Describe)

3. Other study parameters:

a) Sample characteristics:

Geographical (City/country):

Age group:

Ethnicity:

SES:

Gender:

b) Protective factors considered:

Individual

Family

Social Support/ Networks

Schools/ institutions

Religion

Other (please state).....

c) Theoretical Frameworks:

Coping

Resilience

Salutogenesis

Other.....

4. Results:

Briefly describe the findings or if interventions the results for each of the main outcomes, paying particular attention to issues relating to health inequalities:

5. Conclusions:

Describe

Which Questions does this answer and what level of evidence/information does it provide for each question?

Good Ok weak/ minimal

- | | | | |
|----|--------------------------|--------------------------|--------------------------|
| 1) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

6. Does the paper demonstrate any evidence of harms or adverse effects associated with the intervention?
7. In your opinion, are the results generalisable to the UK? Yes <input type="checkbox"/> No <input type="checkbox"/> Not clear <input type="checkbox"/> Why (e.g. similar context for behaviour):
8. Do the authors identify any theoretical implications?
9. Do the authors identify any evidence gaps or make any recommendations for further research?
10. Is there any data on cost-effectiveness presented? (Describe)
11. Are there policy implications of the work?
12. Are there any practice implications of the work?
13. a) Pass to other reviewer for second opinion? Yes / No b) Reason for referral:

Example of template document used for Section One literature

Coping

Q1- Theory

Reference **General definitions**

Reference **Background and rationale**

Reference Key concepts

Reference Applications/ emergent areas

Reference Issues/ limitations/ Implications

Q2 Research approaches

Reference Groups/ areas of research (eg sample, type of stressor)

Reference Methods

Reference Measures

Reference Issues and implications

Q3 Interventions/ practical applications

Reference Rationale

Reference Examples/ components of interventions.

Reference: Limitations/ Implications