

# A CRITICAL REVIEW OF STUDIES OF SOUTH AFRICAN YOUTH RESILIENCE, 1990–2008

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## Keywords:

adolescent; culture;  
protective resources;  
resilience; South Africa

## Dates:

Received: 11 Nov. 2009  
Accepted: 14 June 2010  
Published: 30 July 2010

## How to cite this article:

Theron LC, Theron AMC.  
A critical review of studies of South African youth resilience, 1990–2008. *S Afr J Sci.* 2010;106(7/8), Art. #252, 8 pages. DOI: 10.4102/sajs.v106i7/8.252

## This article is available at:

<http://www.sajs.co.za>

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## ABSTRACT

Given the growing emphasis in research and service provision on strengths rather than deficits, the focus on youth support in the South African *Children's Act* of 2005 and the lack of educational, therapeutic and other resources for most South Africans, insight into, and transdisciplinary commitment to, resilience is crucial. Resilience, or the phenomenon of 'bouncing back' from adversity, is common to societies that grapple with threatened well-being. Increasingly, international resilience studies have suggested that the capacity to rebound is nurtured by multiple resources that protect against risk and that these resources are rooted in culture. In this paper, we critically reviewed 23 articles that focus on South African youth resilience, published in academic journals between 1990 and 2008. By broadly comparing South African findings to those of international studies, we argued for continued research into the phenomenon of resilience and for a keener focus on the cultural and contextual roots of resilience that are endemic to South Africa. Although international resilience research has begun to match the antecedents of resilience to specific contexts and/or cultures, South African research hardly does so. Only when this gap in youth resilience research is addressed, will psychologists, service providers, teachers and communities be suitably equipped to enable South African youth towards sustained resilience.

## INTRODUCTION

Individuals, families and communities, worldwide, are increasingly being placed at risk. Human well-being is threatened, *inter alia*, by economic crises, acts of terrorism, mounting crime and violence, the HIV pandemic and other disease outbreaks, food shortages, escalating divorce incidence, failing education systems and natural disasters. Youth, including South African youth, are not impervious to such risks.<sup>1</sup> One consequence of increasingly difficult lives is the strident call for youth enablement and assistance towards resilience.<sup>2,3</sup> The recent South African *Children's Act* (No. 38 of 2005) emphasises the responsibility of adults in this regard.<sup>4</sup> However, if youth are to be assisted towards sustaining resilience, professionals from a variety of youth-focused disciplines (e.g. teachers, psychologists, social workers, clergy and sports coaches) and communities need to develop insight into, and commitment towards, promoting the phenomenon of resilience; more especially insight into the antecedents of resilience that have enabled South African youth, as resilience is increasingly being conceptualised as a culturally and contextually nuanced construct.<sup>5,6</sup> In the following article we review studies of South African youth resilience in order to provide multidisciplinary professionals with such insight and to show that South African studies, to date, have largely failed to describe the cultural and contextual roots of resilience. We use the latter conclusion to urge researchers and professionals towards rigorous reflection on, and collaborative encouragement of, indigenous (i.e. South African) antecedents of resilience.

This review is focused on 23 academic journal articles (1990–2008) that document resilience among South African youth. Only articles with resilience in the title or in the listed keywords were reviewed. We compared the findings noted in these 23 articles to the tenets of resilience studies internationally and use this broad comparison to motivate for continued, focused research and a transdisciplinary way forward towards the encouragement of youth resilience. Furthermore, in reviewing published studies of South African youth resilience, this article attempts to fill a noticeable gap in the literature by providing a summary of what has been reported to inform South African youth resilience, which will be useful to researchers and academics in the Social and Health Sciences. Two South African reviews do, however, reflect the origins and progress of positive psychology,<sup>7,8</sup> of which resilience is a part, but neither of these includes, or focuses on, what informs the resilience of South African youth.

## THE EVOLUTION OF RESILIENCE

Resilience, which is currently defined as both a process and an outcome characterised by positive adaptation to adversity,<sup>9</sup> is a relatively novel and decidedly complex<sup>10</sup> concept. In the 1980s, a group of North American researchers who were exploring signs of competence and incompetence in children believed to be at-risk for maladaptive outcomes began to notice that a number of these vulnerable children behaved adaptively. In response to this they refocused their study on 'stress resistance'<sup>11</sup> and began to explore what factors protected vulnerable children against maladjustment, hence beginning the research on resilience.

Initially, these protective factors were confined to the individual and included personality traits (e.g. optimism, flexibility and assertiveness), dispositional characteristics (e.g. a sunny disposition, easy temperament and an autonomous approach) and biological factors (e.g. intelligence and good health).<sup>12,13,14</sup> Before long, the focus on the individual was replaced with a growing understanding of resilience as a process that relied on protective factors within the individual, along with those found in families (e.g. healthy family routines, supportive parents and extended family support) and communities (e.g. access to good schools, mentoring adults, opportunities for meaningful extracurricular activity and pro-social peers).<sup>15,16,17</sup> In essence, resilience researchers focused on unearthing the variables contributing to resilience.<sup>18</sup> This variable-focused approach studied the protective factors within the individual, the

family and environment that encouraged resilience, despite a plethora of threatening adversarial contexts (e.g. parental pathology, poverty, violence, chronic illness, neglect, abuse and natural disasters).<sup>10</sup> As such, resilience was conceptualised as the product of a triad of protective factors<sup>10</sup> and not as a personal attribute.<sup>19</sup>

Following this, researchers began to focus on resilience as a transactional process,<sup>20</sup> which relied on ecosystemic transactions that included young people navigating towards, and negotiating for, support and communities and families reciprocating such efforts.<sup>21</sup> Understanding resilience as an ecosystemic concept has encouraged researchers to consider the contextual and cultural forces that are possibly idiosyncratic to a study's participants and to build theories of resilience that embrace cultural antecedents.<sup>22</sup> Thus, in these most recent studies, resilience is conceptualised as a dynamic, context-bound transaction<sup>23</sup> and the focus has shifted from listing protective resources to foregrounding the culturally and contextually specific mechanisms that advance resilience.<sup>9</sup> In other words, the processes (rather than the variables) or pathways<sup>18</sup> informing resilience in specific contexts and cultures have emerged as the focal points of resilience research. As part of this transactional understanding, greater emphasis has been placed on the dynamic, flexible nature of resilience,<sup>24</sup> as argued for by pioneer researchers.<sup>25,26</sup>

## A REVIEW OF SOUTH AFRICAN RESILIENCE STUDIES

In line with international studies of resilient youth, South African studies that were documented in peer-reviewed journals between 1990 and 2008 explored resilience in multiple contexts of risk, including: violence,<sup>27,28,29,30</sup> residential care,<sup>31,32</sup> sexual abuse,<sup>33,34,35</sup> learning disability,<sup>36</sup> adolescence and its challenges,<sup>37,38</sup> township living/poverty,<sup>39,40,41</sup> child-headed households and/or AIDS orphans,<sup>42,43,44,45,46</sup> resource-poor, rural areas<sup>47</sup> and high risk, urban settings.<sup>48</sup>

A review of the research designs utilised in these South African studies revealed that the majority of studies were quantitative (nine in total, with eight of these being non-experimental, see Table 1 for a summary of the methodologies). The quantitative studies employed a plethora of questionnaires, both standardised and self-developed, of which significantly few were South African in origin and none were replicated in subsequent South African studies of resilience. None of the standardised measures were dedicated to the exclusive measurement of resilience, rather, the tendency in the quantitative studies was to utilise questionnaires or sub-scales of questionnaires that focused on traits or resources associated with resilience, instead of resilience.

Hybrid or mixed methods designs were the second most popular. There were seven mixed methods studies (Table 1) of varying types, namely, sequential explanatory, concurrent triangulation and concurrent embedded.<sup>49</sup> Only the mixed methods study of Barbarin et al.<sup>27</sup> was longitudinal. Within these seven mixed methods studies, there appeared to be a greater emphasis on quantitative measures and, as with the nine quantitative studies, the measures were typically not resilience-specific (although a single quantitative measure<sup>40</sup> was resilience-specific) or South African in origin.

There were only five qualitative studies, three of which were case studies. In most instances, data were generated by means of interviews (both individual and focus group, see Table 1). Although visual data were noted in the studies by Ebersöhn and Maree<sup>43</sup> and by Theron<sup>36</sup>, the exact nature of these data were not elaborated or emphasised as a data generation technique. In addition to the aforementioned qualitative studies, two studies were based on a theoretical review (i.e. a review of relevant literature prior to 1990<sup>29</sup> and a review of an intervention programme<sup>45</sup>).

Within the quantitative studies, sample sizes typically ranged from 42 to 375. Only two studies<sup>42,50</sup> engaged larger samples

of youth (i.e. samples of 1238<sup>50</sup> and 2391<sup>42</sup>). The majority of samples represented adolescent youth (see Table 2 for a detailed summary of the participants who took part in the 23 South African studies being reviewed). In the mixed methods studies samples ranged from 7 to 625, with a similar focus on adolescent youth. Although children and/or youth from all race groups were included in the quantitative and mixed method studies, Indian and Coloured children/youth were the least represented. The qualitative studies focused exclusively on Black children and adolescents.

In an effort to explain resilience among South African youth (from all four race groups), the published studies reviewed for this article described resilience as contingent on personal, familial, community and/or cultural protective resources. In so doing, South African studies have mostly adhered to the variable-focused model of explaining resilience.<sup>18</sup> Each of these protective resources is explored individually below in an effort to facilitate richer understanding of each as an antecedent of South African youth resilience. Following this exegesis, we comment on how South African authors conceptualised resilience in their findings and how this compares with international progress in conceptualising resilience.

### Protective resources anchored in the self

It was reported in 17 of the 23 articles that resilience was encouraged (at least in part) by individual factors. Specific personality traits, including: goal and/or achievement orientation,<sup>38,39,41,48</sup> empathy,<sup>32,42,44,48</sup> optimism,<sup>36,42,43,47</sup> autonomy,<sup>32,35,39,40,42,43</sup> conservatism,<sup>32,50</sup> conscientiousness and the ability to self-regulate,<sup>32,35,36,39,40,42,43,44</sup> extroversion and enthusiasm<sup>35,36</sup> and assertiveness<sup>36,40</sup> were linked to resilience.

In addition to personality traits, the following resources were also reported to anchor resilience: problem solving skills and positive cognitive appraisal,<sup>28,32,33,40,42,46,47,48</sup> an internal locus of control,<sup>35,36,39,40,42,47,50</sup> a sense of self-worth<sup>35,36,39,43,44,47</sup> and a preference for socially or system-appropriate behaviour.<sup>35,36,50</sup>

### Protective resources embedded in families

It was suggested in 9 of the 23 articles that resilience was also encouraged by protective resources embedded in families. Although both parents were thought to encourage resilience, protective mothers were singled out in some studies. Smukler<sup>29</sup> noted that a mother's capacity to bond with her child encouraged resilience, especially in violent contexts. Van Rensburg and Barnard<sup>35</sup> reported that mothers buffered the effects of sexual violence, especially when they immediately addressed circumstances integral to such molestation. Black township youth reported that their mothers were often pillars of strength that enabled them by providing a sense of security and by encouraging them actively towards self-actualisation.<sup>41</sup> For example, in a study by Germann<sup>44</sup>, a resilient orphan related how, prior to her mother's AIDS-related death, her mother had modelled resilience by never complaining and not quitting. Similarly, parents encouraged resilience when they coped well with trauma<sup>29</sup> and when they embodied strengths and positive qualities worth emulating.<sup>39</sup>

Parenting practices (i.e. being authoritarian, permissive or democratic-authoritative) have been reported to encourage resilience variably: a study by Kritzas and Grobler<sup>37</sup> indicated how parenting practices that encouraged resilience were correlated with race. For example, mothers who employed democratic-authoritative parenting practices encouraged White youth to develop a sense of coherence and emotional coping strategies, but the same style encouraged Black youth to develop problem-focused coping strategies. When fathers employed democratic-authoritative parenting practices and mothers permissive practices, or, surprisingly, when fathers were permissive and mothers authoritarian, White adolescents reported a sense of coherence. The same was not true for Black adolescents.

**TABLE 1**  
Summary of research methodologies used in South African resilience-focused studies, 1990–2008

Quantitative (9 studies)			Qualitative (5 studies)		Mixed method (7 studies)	
Study	Instruments	Study	Data generation techniques	Study	Instruments / Data generation techniques	
MacDonald et al. <sup>32</sup> (Non-experimental design)	<ul style="list-style-type: none"> <li>A-COPE (Patterson and McCubbin 1987)</li> <li>High School Personality Inventory (South African Institute of Psychological and Psychometric Research 1981)</li> </ul>	Edwards et al. <sup>34</sup> (Multiple case study)	Not specified	Barbarin et al. <sup>27</sup> (Concurrent triangulation design)	<ul style="list-style-type: none"> <li>One-on-one interviews with mother and child</li> <li>Family Relations Scale (Barbarin 1994)</li> <li>Child Behaviour Checklist (Achenbach and Edelbrock 1994)</li> <li>Behaviour Problem Checklist (Zill 1985)</li> <li>South African Child Assessment Schedule (Barbarin and Richter 2001)</li> <li>Health Resources Inventory (Gesten 1976)</li> </ul>	
Govender and Kilian <sup>28</sup> (Non-experimental design)	<ul style="list-style-type: none"> <li>Basic Demographics Questionnaire (Govender and Kilian)</li> <li>Negative Life Events Questionnaire (Mason and Killian 1993)</li> <li>Global Distress Scale (Mason and Killian 1993)</li> <li>Ways of Coping Scale (Lazarus and Folkman 1980)</li> </ul>	Dass-Brailsford <sup>39</sup> (Multiple case study)	<ul style="list-style-type: none"> <li>Ethnographic interviewing (semi-structured individual interviews)</li> <li>Structured individual interview using Damon and Hart's protocol (1988)</li> <li>Written narratives</li> <li>Observation</li> </ul>	Theron <sup>36</sup> (Concurrent triangulation design)	<ul style="list-style-type: none"> <li>Adolescent Self-Concept Scale (Vrey and Venter 1983)</li> <li>Emotional Profile Index (Roets 1997)</li> <li>High School Personality Questionnaire (Madge and Du Toit 1989)</li> <li>Incomplete sentences</li> <li>Projection techniques (Draw-a-person-in-the-Rain; Kritzberg's Three Animal Technique; Three Wishes) (Brink 1997)</li> </ul>	
Collings <sup>33</sup> (Non-experimental design)	<ul style="list-style-type: none"> <li>Self-developed questionnaire (Collings 1994)</li> <li>Social Relationship Scale (McFarlane et al. 1981)</li> <li>Life Experience Survey (Sarason et al. 1978)</li> <li>Brief Symptom Inventory (Derogatis and Spencer 1982)</li> </ul>	Germann <sup>44</sup> (Single case study)	<ul style="list-style-type: none"> <li>Narrative interview</li> <li>Memory work (Hero Book) (Morgan, 2004)</li> </ul>	Van Rensburg and Barnard <sup>35</sup> (Multiple case-study design using concurrent mixed methods)	<ul style="list-style-type: none"> <li>Semi-structured interviews</li> <li>The Social Support Appraisal Scale (Dubow and Ullman 1994)</li> <li>Children's Personality Questionnaire (Du Toit and Madge 1988)</li> <li>Nowicki–Strickland Locus-of-Control Scale (Nowicki and Strickland 1973)</li> <li>Torrance Test of Creative Thinking (Torrance 1974)</li> <li>Child Symptom Inventory-4 (Gadow and Sprafkin 1998)</li> <li>Piers–Harris Children's Self Concept Scale (Piers 1984)</li> </ul>	
Kritzas and Grobler <sup>27</sup> (Non-experimental design)	<ul style="list-style-type: none"> <li>Orientation to Life Questionnaire (Antonovsky 1987)</li> <li>The Cope Scale (Carver, Scheier and Weintraub 1989)</li> <li>Parental Authority Questionnaire (Buri 1991)</li> </ul>	Pillay and Nesengani <sup>46</sup>	<ul style="list-style-type: none"> <li>Individual and focus group interviews with learners</li> <li>Focus group interviews with teachers</li> <li>Written life histories</li> <li>Observations</li> </ul>	Mampane and Bouwer <sup>40</sup> (Mixed methods study – sequential explanatory design)	<ul style="list-style-type: none"> <li>The Resilience Scale (self-developed by Mampane and Bouwer)</li> <li>The Learning Behaviour Scale (self-developed by Mampane and Bouwer)</li> <li>In-depth interviews (based on responses to Resilience Scale)</li> </ul>	
Bloemhoff <sup>31</sup> (Experimental design: pre-test, post-test and control-group design)	<ul style="list-style-type: none"> <li>The Shortened Protective Factors Scale (Witt et al. 1996)</li> </ul>	Ebersöhn and Maree <sup>43</sup>	<ul style="list-style-type: none"> <li>Simple and participatory observations</li> <li>Informal individual interviews</li> <li>Visual data (photographs, digicam recordings)</li> <li>Field notes</li> <li>Audio data</li> </ul>	Theron <sup>41</sup> (Concurrent triangulation design)	<ul style="list-style-type: none"> <li>Lifeskills Rating Scale (Theron and Dalzell 2006)</li> <li>Focus group interviews</li> </ul>	
Pienaar et al. <sup>50</sup> (Non-experimental design)	<ul style="list-style-type: none"> <li>The Satisfaction with Life Scale (Diener et al. 1985)</li> <li>The Fortitude Questionnaire (Pretorius 1998)</li> <li>The Sense of Coherence Scale (Antonovsky 1987)</li> </ul>			Johnson and Lazarus <sup>48</sup> (Mixed methods study – sequential explanatory design)	<ul style="list-style-type: none"> <li>The California Healthy Kids Survey (WestEd 2004)</li> <li>The MindMatters Health promoting Schools questionnaire (MindMatters 2002)</li> <li>Focus group interviews</li> </ul>	
Ebersöhn <sup>42</sup> and Ebersöhn <sup>47</sup> (Overall design: participatory action research – data in this publication based on quantitative non-experimental methods)	<ul style="list-style-type: none"> <li>The Conservatism Scale (Wilson and Patterson 1970)</li> <li>Self-developed questionnaire comprising five dichotomous questions (e.g. I feel safe at school. Yes/No) and open-ended questions involving pictorial prompts</li> </ul>			Kruger and Prinsloo <sup>38</sup> (Mixed methods study – embedded concurrent design)	<ul style="list-style-type: none"> <li>Observation</li> <li>Self-reflective evaluations</li> <li>Resiliency Scale (self-developed)</li> </ul>	
Ward et al. <sup>30</sup> (Non-experimental design)	<ul style="list-style-type: none"> <li>Social and Health Assessment (Ruchkin et al. 2004)</li> </ul>					

Two review-based resilience-focused studies have also been conducted by Smukler<sup>29</sup> and Jewitt<sup>45</sup>.

**TABLE 2**  
Detailed summary of participants in South African resilience-focused studies, 1990–2008

Quantitative (9 studies)		Qualitative (5 studies)		Mixed method (7 studies)	
Study	Sample	Study	Participants	Study	Sample / participants
MacDonald et al. <sup>32</sup>	42 White, English-speaking adolescents living in residential children's homes in the Durban area	Edwards et al. <sup>34</sup>	Two Black females	Barbarin et al. <sup>27</sup>	625 six-year-old Black South African children
Govender and Kilian <sup>28</sup>	172 Black adolescent youths (Grade 9) living in the townships of the Midlands region of KwaZulu-Natal (94 boys and 83 girls)	Dass-Brailsford <sup>39</sup>	16 participants (8 boys and 8 girls) with isiZulu as home language in their 1st year at university	Theron <sup>36</sup>	20 English mother-tongue learners (15 boys and 5 girls), Grades 8 to 12 from a secondary government school for learners with special educational needs
Collings <sup>33</sup>	223 female undergraduate students who reported an unwanted childhood sexual experience	Germann <sup>44</sup>	A female, born in 1988 in Bulawayo, Zimbabwe, heading a household	Van Rensburg and Barnard <sup>35</sup>	7 White girls with an average age of 9 years and 8 months who had been sexually molested
Kritzas and Grobler <sup>37</sup>	360 Grade 12 learners from racially integrated, English-medium, secondary schools (Free State Province)	Pillay and Nesengani <sup>46</sup>	Early adolescent (13–16 years) Black youth (Limpopo) from child-headed families: 2 male and 2 female youth wrote life histories; 10 individual and 4 focus group interviews 4 focus groups with teachers (6 participants in each)	Mampane and Bouwer <sup>40</sup>	12 learners (6 boys and 6 girls) from a secondary school in a township; 8 curricular teachers for Grades 8 and 9
Bloemhoff <sup>31</sup>	47 boys from an educational youth care centre (behavioural and/or emotional problems) with an average age of 15.8 years	Ebersöhn and Maree <sup>43</sup>	6 South African communities located in four South African provinces (2 rural communities in Limpopo, 2 urban communities in Gauteng, and 1 rural community each in the Eastern Cape and Mpumalanga Provinces)	Theron <sup>41</sup>	Survey sample: 934 vulnerable and resilient youth (boys and girls) in Grade 9 from 8 townships in the Gauteng, North-West and Free State Provinces. Interview participants totalled 80 resilient youth
Pienaar et al. <sup>50</sup>	1238 Grade 12 learners (42.8% male and 57.2 female; 47.9% English-speaking, 36.7% Afrikaans-speaking, and 15.4% African language-speaking) (Eastern Cape and Gauteng Provinces)			Johnson and Lazarus <sup>48</sup>	472 White, Black and Coloured Afrikaans-, English- and Isi-Xhosa-speaking Grade 9 learners (210 boys; 262 girls), 12–18 years from schools in the Western Cape Province
Ebersöhn <sup>42</sup> and Ebersöhn <sup>47</sup>	2391 children (1200 girls and 1191 boys) between the ages of 3 and 21 years from 78 schools in the Limpopo Province			Kruger and Prinsloo <sup>38</sup>	27 adolescents (Grade 8) in an inner-city school in Johannesburg: 9 Black (6 boys and 3 girls) 9 White (6 boys and 3 girls) 4 Coloured (1 boy and 3 girls) 3 Indian boys
Ward et al. <sup>30</sup>	375 Grade 6 learners (191 girls and 184 boys; 85 English-speaking and 290 Afrikaans-speaking) living in a high-violence community in Cape Town				

Supportive family relationships were thought to, (1) buffer violence,<sup>27</sup> (2) enable girls to cope resiliently with molestation,<sup>35</sup> (3) encourage Black youth completing tertiary studies towards sustaining resilience when facing the many challenges of such a trajectory,<sup>39</sup> (4) enable adaptation in contexts of HIV and AIDS<sup>42</sup> and (5) enable school-going Black youth towards a commitment to school education, an acceptance of poverty and the development of practical solutions to the daily difficulties they face.<sup>41</sup> To this end, supportive family relations included joint participation in activities, experiences of belonging, being loved and being valuable within the family system, opportunities to pursue education, as well as the establishment of clear, consistent family rules.<sup>35,41</sup>

Only Dass-Brailsford<sup>39</sup> noted that siblings played a role in youth resilience and only Dass-Brailsford<sup>39</sup> and Theron<sup>41</sup> made mention of extended family members being pivotal to youth resilience.

### Protective resources anchored in the community

It was suggested in 18 of the 23 articles that resilience was encouraged, *inter alia*, by protective resources anchored within communities. The community resource most emphasised in this regard was schools.<sup>27,28,29,30,35,39,41,42,45,47,48</sup> Herein, teachers were singled out as being supportive, fair, non-discriminatory, motivating, inspiring role models, encouraging, helpful and caring.<sup>35,39,41,42,47,48</sup> In addition to teaching staff, schools enabled youth towards resilience when they provided youth with a safe space in which they felt secure,<sup>27</sup> or in which youth could

vent emotion or open up.<sup>41</sup> Schools that were well-resourced and aesthetically attractive were thought to encourage resilience,<sup>28,42,47,48</sup> as did schools that maintained academic excellence and/or encouraged meaningful after-school activity.<sup>28,30,38,41,42,47</sup> Life-skills curricula were also reported to be a significant resilience-promoting resource.<sup>41,42,47</sup>

Community support was often cited as resilience-promoting,<sup>27,29,34,35,39,41,46</sup> but the specifics of what such support entailed remained unclear in most of the literature. When it was clarified, however, community support related to communities that, (1) were peopled by adults who could be respected and who supported youth success,<sup>39</sup> (2) provided opportunities for therapy and bereavement counselling,<sup>45</sup> (3) encouraged the experiences of active support from peers<sup>35,46</sup> and teachers<sup>35</sup> promoted the sharing of expertise, food, clothing, financial resources and advice,<sup>41</sup> and (4) motivated for community mobilisation<sup>45</sup> and community synergy to limit crime and violence.<sup>41</sup>

Peers were reported as resilience-promoting in a number of studies,<sup>27,35,38,44,46</sup> primarily because they afforded opportunities for social acceptance and the development of positive identity and values<sup>46</sup> and because youth could talk to their peers about troubling matters and trust them to help out with any problems they may be facing.<sup>35</sup>

Communities encouraged resilience when they provided youth with opportunities to enjoy<sup>28,30</sup> or participate in activities that

**TABLE 3**  
Conceptualisations of resilience in South African studies

Study indexed by author	Operational definition of resilience	Conceptualisation of resilience
Collings <sup>33</sup>	The absence of psychopathology / manifestation of adaptive behaviour	Product of individual traits
Theron <sup>36</sup>	The ability to triumphantly negotiate life's adversities and continue along the path of self-actualisation	
MacDonald et al. <sup>32</sup>	The potential for escape from risk	
Govender and Kilian <sup>28</sup>	Reduction of the adverse psychological states associated with the stress of violence	Variable-focused conceptualisation: Product of a dyad or triad of protective resources
Jewitt <sup>45</sup>	None specified	
Kritzas and Grobler <sup>37</sup>	Positive developmental outcomes in the face of adversity. This is influenced by internal as well as external life factors and experiences	
Edwards et al. <sup>34</sup>	None specified	
Mampane and Bouwer <sup>40</sup>	The disposition to identify and utilise personal capacities, competencies (strengths) and assets in a specific context. Fuelled by interaction between the individual and the context	
Pienaar et al. <sup>50</sup>	Psychological well-being	
Bloemhoff <sup>31</sup>	The capacity to overcome risk and avoid negative outcomes	
Ebersöhn and Maree <sup>43</sup>	A combination of specific intrapersonal capacities and environmental support systems (protective factors)	
Ward et al. <sup>30</sup>	Multi-dimensional construct	
Smukler <sup>29</sup>	Equal to invulnerability or stress resistance	
Van Rensburg and Barnard <sup>35</sup>	Ability to resist the negative impact of trauma. Influenced by multiple factors	
Pillay and Nesengani <sup>46</sup>	The process of the capacity for, or outcome of successful adaptation, despite challenging circumstances	
Kruger and Prinsloo <sup>38</sup>	The capability to cope and rebound in the face of significant adversity	
Ebersöhn <sup>47</sup>	Strengths arising from multiple systems encourage resilience	
Barbarin et al. <sup>27</sup>	None specified	Transaction-focused conceptualisation: Product of a complex transaction between the individual, supportive relationships, community and cultural resources
Dass-Brailsford <sup>39</sup>	The ability to maintain competence despite stressful and difficult life circumstances	
Germann <sup>44</sup>	The ability to bounce back and learn from adverse situations	
Ebersöhn <sup>42</sup>	Resilience is tantamount to a type of giftedness entailing emotion, social, academic and spiritual buoyancy	
Theron <sup>41</sup>	Dynamic interaction between an individual, a given milieu, and accessible opportunities. Resilient functioning is imputed to a multitude of processes that vary according to context	
Johnson and Lazarus <sup>48</sup>	A dynamic developmental process that examines the interplay between risk and protective factors and the role of the family, school, community and peers. This dynamic developmental process involves using assets or resources to overcome risks	

allowed them to sustain a sense of competence,<sup>31,40</sup> or when they could provide youth with access to recreational resources (e.g. libraries and sports teams).<sup>41</sup> Communities also encouraged resilience when they provided youth with a sense of security, comfort and belonging.<sup>43</sup>

### Protective resources facilitated by culture

It was suggested in 9 of the 23 articles that resilience was encouraged by protective resources embedded in culture, but, in all of these, this was essentially limited to religion. Religious practices (Christian and ancestral), religious leaders and personal faith were described as fundamental to the processes and outcomes of resilience.<sup>27,29,34,38,39,44,50</sup> Being part of a religious community was noted as a means to further the support bases accessible to youth.<sup>44</sup>

A limited number of articles linked resilience to cultural values. Germann<sup>44</sup> noted the need for research into models of resilience that were sensitive to Southern African culture, whilst Ebersöhn<sup>42</sup> called for community-based initiatives towards resilience that were embedded in time-honoured practices, beliefs and structures, which, in all probability, would be nuanced by culture. Dass-Brailsford<sup>39</sup> reported that extended families typical of indigenous African values were instrumental in encouraging resilience. Theron<sup>41</sup> noted that the traditional values of 'ubuntu' encouraged resilience among the township participants in her study. Barbarin et al.<sup>27</sup> recommended a revival of 'ubuntu' values to encourage future resilience, but did not report 'ubuntu' as instrumental to youth resilience in their findings. Pienaar et al.<sup>50</sup> associated resilience-promoting practices (i.e. a conforming attitude to authority and religious commitment) with the cultural values of Afrikaans-speaking and African language-speaking adolescents.

### Conceptualisations of resilience

In many ways, South African explorations of youth resilience mirror the evolution of resilience as manifested in international studies (Table 3). South African researchers have conceptualised resilience as the product of individual traits, the product of protective resources and as the product of a person-context transaction.

Although resilience has been conceptualised as the product of individual traits, these traits appeared to be the focus of the research, rather than the conceptualisation of resilience itself.<sup>32,36</sup> Rather than focus on resilience as embedded in the individual, South African studies typically conceptualise resilience as the product of two or more of the triad of protective factors (which might include individual resources), as described in earlier resilience research.<sup>15,16,17,19</sup> Mostly, South African studies emphasise that resilience is encouraged by a dyad of resources<sup>28,30,34,40,43,50</sup> or a triad of resources.<sup>29,35,46,47</sup> Most typically, such dyads or triads include personal or community resources. In other words, resilience was, for the most part, *not* conceptualised as a complex, transactional phenomenon nurtured dynamically by a protective gestalt of young people's personal strengths, their supportive relationships, cultural values and practices and community resources.

The limited exception to the latter was noted in the work of Barbarin et al.<sup>27</sup>, Dass-Brailsford<sup>39</sup>, Ebersöhn<sup>42</sup>, Germann<sup>44</sup>, Johnson and Lazarus<sup>48</sup> and Theron<sup>41</sup>. In these articles, interpersonal protective resources embedded in families, communities and culture, along with intrapersonal strengths, are reported to underpin and cultivate resilience. As noted, the cultural roots of resilience related mainly to religious faith. The South African studies<sup>27,39,41,42</sup> that highlighted the fact that

South African cultural values (i.e. 'ubuntu') need to be factored in to an understanding and promotion of youth resilience were almost lone voices. There was no consideration of other cultural antecedents of resilience (such as rites of passage, ethnic traditions of dance and music, or meditation). Despite the acknowledgement of the complex interaction of protective resources in this group of studies, there was little theorising about the processes, pathways or transactions informing this complexity and so, compared to more recent progress in international resilience-focused research, South African research is lagging. Resilience is seldom conceptualised as a youth-context transaction, in which youth actively navigate towards resilience-promoting resources and in which ecologies keenly affirm youth efforts to 'bounce back' in contextually and culturally relevant ways.<sup>22,23</sup>

### THE WAY FORWARD

The current under-emphasis in South African studies on the reciprocal youth-context dynamics of resilience and the tendency of South African studies to favour smaller, quantitative designs, have a number of significant implications, which are detailed in the following sections.

#### Implication for future research methodologies

Attempts to understand what is local about resilience need to be embedded in rigorous and large-scale studies that represent the racial diversity of resilient South Africans. To date, most quantitative and hybrid South African studies of resilience have included neither sufficiently substantial nor racially representative samples. Furthermore, researchers typically neglected to employ resilience-specific instruments. This neglect probably reflects operationalisations of resilience as a gestalt of protective factors versus risk factors, as noted in earlier conceptualisations of resilience.<sup>10</sup> Regardless of the rationale for this piecemeal exploration of resilience, it is imperative that future studies develop resilience-focused instruments or standardise internationally developed resilience-focused measures and repeat these measures in subsequent studies. In the absence of rigorous, extensive studies using resilience-specific measures, it will remain difficult to offer an authoritative profile of South African youth resilience.

Robust, representative quantitative studies are not, however, the future methodological panacea. To gain a comprehensive understanding of the roots of, and pathways to, South African youth resilience, future designs must include rich qualitative exploration. Internationally, resilience studies have embraced creative and participatory data generation techniques such as photo-elicitation,<sup>51</sup> video-recording a day in the life of resilient toddlers<sup>5</sup> and participant-generated drawings that illustrate emic understandings and/or experiences of resilience.<sup>51</sup> Similarly, innovative, cooperative qualitative methods are requisite to gain a profound understanding of the transactions that nurture the capacity for resilience in South African youth who are emotionally and physically vulnerable.

In other words, if South African researchers are to plumb the complexities of resilience as a process and outcome, a synthesis of quantitative and qualitative approaches is loudly called for. International researchers caution that resilience is a complex phenomenon to research<sup>52</sup> and that its complexity is best researched using hybrid designs.<sup>53,54</sup> To progress beyond the provision of an inventory of the antecedents of resilience, future South African studies need to subscribe to mixed method designs, as modelled by international researchers. Simultaneously, within such a synthesised approach, South African researchers need to explore, and develop, indigenous data-generation strategies that resonate with the cultures and contexts of South African youth.

Ultimately, the growing understanding of resilience as a time-bound, dynamic phenomenon<sup>24</sup> is not demonstrated in South African studies. South African researchers are urged to revisit

participants to comment on how resilience has been sustained, with the express purpose of unearthing what contributes to, or endangers sustained resilience. Such longitudinal answers will equip mental health practitioners, teachers, policymakers and parents to promote strategies that will sustain longer-term well-being.

#### Implications for transdisciplinary intervention

Even if South African studies, to date, have predominantly provided an inventory of the protective factors and resources underpinning resilience, rather than conceptualising these as a dynamic, context-bound transaction,<sup>20,23</sup> the documented resources provide teachers, psychologists, social workers, clergy, sports coaches (and other youth-focused professionals) and communities with an understanding of what has contributed to the resilience of South African youth. This provides professionals with a starting point for devising strategies and compiling interventions that will nurture resilience. At the very least, this understanding might contribute to the development of therapeutic goals, lesson contents or youth workshop programmes (e.g. the development of active problem-solving skills or self-worth building) and to agendas for community education (e.g. educating communities about the importance of recreational opportunities for youth, championing positive schools and encouraging religious activity) or parent education (e.g. encouragement of positive family relations and healthy parenting styles).

More importantly, perhaps, the summarised findings of the South African studies prove Masten's assertion that resilience is nurtured by everyday resources, common to individuals, families, communities and culture.<sup>55</sup> These conventional roots of South African resilience suggest that resilience is not rare and that active steps can be taken to develop and sustain resilience among youth who are placed at risk by ordinary and extraordinary adversities. Because the findings do not point to any one discipline as the key to resilience promotion, no youth-focused professional can refute responsibility towards promoting youth resilience. International promotion of health and well-being increasingly favours a transdisciplinary approach, which amplifies professional collaboration and enhances well-being outcomes<sup>56</sup> – the same is needed if South African professionals are to compensate for inadequate access to health-promoting resources that most South African youth experience.<sup>57</sup> Ideally, professionals from disciplines that include a youth-focus need to collaborate in the compilation of resilience-promoting interventions and preventative measures and in community and parent education initiatives.

Of equal importance are professionals with an interest in enabling youth, who need to go beyond a variable-focused understanding of resilience. Although this variable-focused approach has allowed an inventory of the factors that encourage resilience in South African youth, which can subsequently be used to amplify the provision of, and access to, protective resources, professionals need to consider which transactions underpin resilience, so that transdisciplinary interventions can influence the processes that encourage resilience. Such process-focused strategies<sup>18</sup> are the bedrock of comprehensive interventions that effectively alter lives for the better.

However, to understand these processes and truly champion resilience, youth-focused professionals need to better understand how context and culture influence resilience-promoting transactions among South African youth. To do so, professionals need to partner with communities and community representatives in efforts to understand the local elements of resilience. Furthermore, transdisciplinary, critical reflections and robust studies that magnify our South African context and indigenous culture are urgently needed.

### CONCLUSION

Along with South African professionals who provide youth services, researchers need to actively pursue factors and

processes indigenous to South African culture(s) and contexts that nurture resilience among youth. Without discounting the rich potential of 'ubuntu' to encourage positive human relations and active support of one another (and, in so doing, foster adaptive coping when adversity looms), this philosophy cannot be the only contextual and cultural resource available for resilience promotion.<sup>27,39,41</sup> To this end, a number of questions can be posed to stimulate context- and culture-based research in this regard:

- Are there resilience-promoting ways of relating within families and within communities that are culturally distinctive?
- What are the cultural practices and/or rituals that embolden and enable young people?
- To what cultural values do schools that nurture youth resilience subscribe?
- What do cultures teach about problem-solving approaches, assertiveness and system-appropriate behaviour that can be harnessed to promote resilience?

In short, all of the protective resources detailed as supporting South African youth resilience need to be subjected to a culturally shaded enquiry, followed by rigorous enquiry into cultural processes that promote resilience.

Perhaps part of the difficulty in unearthing the cultural and contextual roots of resilience among South African youth is the plurality of cultures and contexts native to South Africa. This difficulty calls for focused research that selects specific ethnic groups and varying contexts to unearth what their 'home-grown' resilience-promoting resources are. It also calls for a diligent comparison of these studies, aimed at developing a consciousness of germane and situational protective processes and their distinctive ecological applications. To neglect such a focus, is to acquiesce to the Western dominance of social and psychological theory.<sup>58</sup>

By endeavouring to explain how South African cultures and contexts shape youth resilience, we aim to contribute to the international discourse on resilience, which has moved beyond an articulation of the factors and processes that anchor resilience, to a more focused enquiry into the dynamic, context-specific processes that fuel resilience.<sup>9,20</sup> Although some South African researchers do note that the antecedents of resilience (as evidenced in their findings) are context-bound, there is little robust discussion of how these antecedents are context specific. It is our hope that our exploration of the cultural processes that underpin South African youth resilience can enrich the understanding that resilience hinges on the universal *and* the specific. This endeavour is both our responsibility and, given the cultural richness of our country, our potential legacy to the evolving conceptualisation of resilience. By searching for the indigenous, there is a real opportunity to transform how resilience is conceptualised and to enable South African youth.<sup>59</sup>

## REFERENCES

1. Morrow S, Panday S, Richter L. Young people in South Africa in 2005: Where we're at and where we're going. Halfway House: Umsobomvu Youth Fund; 2005.
2. Pambazuka. South Africa: Youth empowerment – Amy Biehl Foundation [homepage on the Internet]. 2007 [cited 2009 June 04]. Available from: <http://www.pambazuka.org/en/category/fundraising/42953>
3. Reddy SP, Panday S, Swart D, et al. Umthenthe uhlaba usamila – The SA youth risk behavior survey 2002. Cape Town: South African Medical Research Council; 2003.
4. Government Gazette. Recent South African Children's Act, 38 of 2005. No. 28944 [statue on the Internet]. 2006 [cited 2009 June 05] Available from: <http://www.justice.gov.za/legislation/acts/2005-038%20childrensact.pdf>
5. Cameron CA, Ungar M, Liebenberg L. Cross-cultural understandings of resilience: Roots for wings in the development of affective resources for resilience. *Child Adolesc Psychiatr Clin N Am.* 2007;16(2):285–301.
6. World Health Organization (WHO). Promoting mental health: Summary report [document on the Internet]. Geneva: WHO. 2004 [cited 2009 June 04]. Available from: [http://www.who.int/mental\\_health/evidence/en/promoting\\_mhh.pdf](http://www.who.int/mental_health/evidence/en/promoting_mhh.pdf)
7. Strümpfer DJW. Standing on the shoulders of giants: Notes on early positive psychology (psychofortology). *S Afr J Psychol.* 2005;35(1):144–167.
8. Strümpfer DJW. Positive emotions, positive emotionality and their contribution to fortigenic living: A review. *S Afr J Psychol.* 2006;36(1):21–45.
9. Cyrulnik B. Resilience. How your inner strength can set you free from the past. London: Penguin Books; 2009.
10. Luthar SS, Cicchetti D, Becker B. The construct of resilience: A critical evaluation and guidelines for future work. *Child Dev.* 2000;71(1):543–562.
11. Garmezy N, Masten AS, Tellegen A. The study of stress and competence in children: A building block for developmental psychopathology. *Child Dev.* 1984;55:97–111.
12. Anthony EJ, Cohler BJ. The invulnerable child. New York: The Guilford Press; 1987.
13. Rutter M. Resilience in the face of adversity: Protective factors and resistance to psychiatric disorder. *Br J Psychiatry.* 1985;147:598–611.
14. Werner EE, Smith RS. Vulnerable but invincible. A longitudinal study of resilient children and youth. New York: McGraw Hill; 1982.
15. Masten AS, Garmezy N, Tellegen A, et al. Competence and stress in school children: The moderating effects of individual and family qualities. *J Child Psychol Psychiatry.* 1988;29(6):745–764.
16. Rak C, Patterson LE. Promoting resilience in at-risk children. *J Couns Dev.* 1996;74:368–373.
17. Smith J, Prior M. Temperament and stress resilience in school-age children: A within-family study. *J Am Acad Child Adolesc Psychiatry.* 1995;34(2):168–179.
18. Masten A, Reed MJ. Resilience in development. In: Snyder CR, Lopez SJ, editors. *Handbook of positive psychology.* New York: Oxford University Press, 2005; p. 74–88.
19. Luthar SS, Zelazo LB. Research on resilience: An integrative review. In: Luthar SS, editor. *Resilience and vulnerability: Adaptation in the context of childhood adversities.* Cambridge: Cambridge University Press, 2003; p. 513–544.
20. Sameroff AJ, editor. *The transactional model of development: How children and contexts shape each other.* Washington DC: American Psychological Association; 2009.
21. Ungar M, Brown M, Liebenberg L, et al. Distinguishing differences to pathways to resilience in Canadian youth. *Can J Community Ment Health.* 2008;27(1):1–13.
22. Ungar M, Brown M, Liebenberg L, et al. Unique pathways to resilience across cultures. *Adolescence.* 2007;42(166):287–310.
23. Rutter M. Resilience, competence and coping. *Child Abuse Neglect.* 2007;31:205–209.
24. Green G, Rhodes J, Heitler Hirsch A, Suárez-Orozco C, Camic PM. Supportive adult relationships and the academic engagement of Latin American immigrant youth. *J SchPsychol.* 2008;46:393–412.
25. Egeland B, Carlson E, Sroufe A. Resilience as process. *Dev Psychopathol.* 1993;5:517–528.
26. Pianta RC, Walsh DJ. Applying the construct of resilience in schools: Cautions from a developmental systems perspective. *Psychol Rev.* 1998;27:407–417.
27. Barbarin OA, Richter L, De Wet T. Exposure to violence, coping resources and psychological adjustment of South African children. *Am J Orthopsychiatry.* 2000;71(1):16–25.
28. Govender K, Kilian BJ. The psychological effects of chronic violence on children living in South African townships. *S Afr J Psychol.* 2001;31(2):1–11.
29. Smukler D. Growing up in violent situations – The South African situation. *S Afr J Child Adol Psychiatry.* 1990;2(1):7–12.
30. Ward CL, Martin E, Theron C, Distiller GB. Factors affecting resilience in children exposed to violence. *S Afr J Psychol.* 2007;379(1):165–187.



31. Bloemhoff HJ. Impact of facilitation on the effectiveness of an adventure-based recreation programme for the development of resiliency in at-risk adolescent boys confined to a rehabilitation centre. *Afr J Phys Health Educ Recreat Dance*. 2006;12(2):138–151.
32. MacDonald E, Gillmer BT, Collings SJ. Adolescents in residential care: A study of personality, coping styles, and resilience. *Soc Work Pract Res*. 1996;9(3):233–240.
33. Collings SJ. Surviving child sexual abuse. *Soc Work Pract Res*. 2003;15(1):97–110.
34. Edwards D, Sakasa P, Van Wyk G. Trauma, resilience and vulnerability to PTSD: A review and clinical case analysis. *J Psychol Afr*. 2005;15(2):143–153.
35. Van Rensburg E, Barnard C. Psychological resilience among sexually-molested girls in the late middle-childhood: A case study approach. *CARSA*. 2005;6(1):1–12.
36. Theron LC. The role of personal protective factors in anchoring psychological resilience in adolescents with learning difficulties. *S Afr J Educ*. 2004;24(4):317–321.
37. Kritzas N, Grobler A. The relationship between perceived parenting styles and resilience during adolescence. *Child Adolesc Ment Health*. 2005;17(1):1–12.
38. Kruger L, Prinsloo H. The appraisal and enhancement of resilience modalities in middle adolescents within the school context. *S Afr J Educ*. 2008;28(2):241–259.
39. Dass-Brailsford P. Exploring resiliency: Academic achievement among disadvantaged Black youth in South Africa. *S Afr J Psychol*. 2005;35(3):574–591.
40. Mampane R, Bouwer C. Identifying resilient and non-resilient middle-adolescents in a formerly Black-only urban school. *S Afr J Educ*. 2006;26(3):443–456.
41. Theron LC. Uphenyongokwazi kwentsha yasemalokishini ukumelana nesimo esinzima: A South African study of resilience among township youth. *Child Adolesc Psychiatr Clin N Am*. 2007;16(2):357–376.
42. Ebersöhn L. Voicing perceptions of risk and protective factors in coping in a HIV&AIDS landscape: Reflecting on capacity for adaptiveness. *Gifted Education International*. 2007;23(2):1–27.
43. Ebersöhn L, Maree JG. Demonstrating resilience in an HIV&AIDS context: An emotional intelligence perspective. *Gifted Education International*. 2006;22(1):14–30.
44. Germann SE. I am a hero – Orphans in child-headed households and resilience. *Commonwealth Youth Dev*. 2005;3(2):39–53.
45. Jewitt L. Building resilience and hope for the future. *Children First*. 2001;Nov:12–14.
46. Pillay J, Nesengani RI. The educational challenges facing early adolescents who head families in rural Limpopo Province. *Educ Change*. 2006;10(2):131–147.
47. Ebersöhn L. Children's resilience as assets for safe schools. *J Psychol Afr*. 2008;18(1):11–18.
48. Johnson B, Lazarus S. The role of schools in building resilience of youth faced with adversity. *J Psychol Afr*. 2008;18(1):19–30.
49. Creswell JW. *Research design. Qualitative, quantitative and mixed methods approaches*. Thousand Oaks: Sage; 2009.
50. Pienaar JM, Beukes RBI, Esterhuyse KGF. The relationship between conservatism and psychological well-being in adolescents. *S Afr J Psychol*. 2006;36(2):391–406.
51. Liebenberg L. Visual methods when working with youth across cultures. In: Liebenberg L, Ungar M, editors. *Researching resilience*. Toronto: University of Toronto Press, 2009; p. 129–152.
52. Liebenberg L, Ungar M. Introduction: The challenges in researching resilience. In: Liebenberg L, Ungar M, editors. *Researching resilience*. Toronto: University of Toronto Press, 2009; p. 3–25.
53. Cameron CA. Constructing syntheses: Striving for convergent methods for investigating youth in diverse cultures. In: Liebenberg L, Ungar M, editors. *Researching resilience*. Toronto: University of Toronto Press, 2009; p. 225–244.
54. Este D, Sitter K, Maclaurin B. Using mixed methods to understand youth resilience. In: Liebenberg L, Ungar M, editors. *Researching resilience*. Toronto: University of Toronto Press, 2009; p. 201–224.
55. Masten AS. Ordinary magic: Resilience processes in development. *Am J Psychol*. 2001;56:227–238.
56. Edwards OE. Administering, scoring and reporting test results. In: Mpofu E, Oakland T, editors. *Assessment in rehabilitation and health*. Upper Saddle River: Pearson Education, 2010; p. 139–157.
57. Gray M. The progress of social development in South Africa. *J Soc Welfare*. 2006;15(suppl 1):53–64.
58. Mgazwa S, Sodi T, Baloyi L, Mkhize N. African psychology for human emancipation: An invitation to dialogue. Round table discussion. Proceedings of the 15th South African Psychology Conference; 2009 Aug 12–14; Cape Town, South Africa.
59. Mertens DM. *Transformative research and evaluation*. New York: The Guilford Press; 2009.