

ARIZONA HEALTH SURVEY SPECIAL ISSUE  
PREPARED BY THE RESILIENCE SOLUTIONS GROUP, ARIZONA STATE UNIVERSITY

# Resilience and Mental Health Across Generations

Parents and Adolescents



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## Parents and Adolescents

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## Summary

The current study considered risk, resilience, and health in a subsample from the Arizona Health Survey 2008 that included adolescents and their parents. Previous research has underscored the role of parent mental health in adolescent adjustment, with children of depressed mothers, for example, more likely to manifest symptoms of anxiety, depression, and conduct problems. Much less is known about the associations between resilience in parents and their adolescent offspring. Results indicated that both parents and adolescents who were more resilient had higher quality of life, well-being, and physical activity. Resilience appeared to be protective for poor health outcomes, with resilience relating to better general health, fewer physical health impairments, lower body mass index, less psychological distress, fewer mental diagnoses and less need for help with emotional problems. Considering associations across generations, parent mental health diagnoses and desire for help with emotional problems predicted adolescent psychological distress and desire for help with emotional problems. However, parent and adolescent mental health and resilience were largely independent of each other such that parent resilience did not predict adolescent resilience or health. Study results support Masten's definition of resilience as "ordinary magic," such that adolescent quality of life is not defined by their parents' quality of life.

## Impact on the Public's Interest/Awareness of Health and Mental Health

There is a critical need for scientifically valid studies that can inform parents, policymakers, and practitioners about resilience processes for adolescents. By focusing on components of resilience, we can elucidate processes by which adolescents bounce back after adversity and grow to be competent, caring individuals. The opportunity to study the synchronies and dysynchronies among adult and adolescent mental health and resilience enables a novel look at the socialization of resilience. More is known about how poor parental health influences adolescents; the study of how parent resilience traits can foster mental health in adolescents can raise interest and awareness about factors that positively influence adolescents' mental health.

## Background

Over 21% of children between the ages of 9 and 17 contend with some form of mental disorder (Surgeon General Report, Satcher, 1999). These mental health issues are often seen as a problem of the individual; however, parents, the family environment, and the larger community have been shown to influence children's adjustment. In addition, although the circumstances that increase an adolescent's risk of developing a mental disorder may be difficult to avoid (i.e., parental mental disorder, low socioeconomic status), resilience theory offers an approach to examining factors that buffer the adolescent from these negative influences. *Resilience* is an individual's ability to function successfully when exposed to an outside risk or threat to healthy functioning (Masten & Coatsworth, 1998). Resilience can be manifest at multiple levels— the individual, the family, and the community (Armstrong, Birnie-Lefcovitch & Ungar, 2005; Rutter, 2002).

A well-established risk for adolescent mental health is parent mental illness. The literature linking parent's to child's mental health thus far has focused largely on maternal depression. Children of depressed mothers, for example, are at increased risk for behavior problems, developmental delay, depression, and injuries (Chassin, Rogosch, & Barrera, 1991; Fergusson, Horwood, & Lynskey, 1995; Russell, 1998). Less is known about the influence of other maternal mental health symptoms or about the influence of the father. Limited evidence has indicated that mothers' symptoms of anxiety and depression may be more strongly associated with children's externalizing and internalizing mood and behavior problems than fathers' mental health symptoms (Kahn, Brandt, & Whitaker, 2004). Research that is able to independently examine a range of parent mental health markers would advance current knowledge. Additionally, the association of parental mental health and the child's adjustment may also depend upon the child's age, with younger children expressing fewer problems than older children or adolescents when exposed to parents with mental health issues (Radke-Yarrow & Brown, 1993).

While we know something of how poor parental mental health relates to child or adolescent mental health, much less is known about the association between parent resilience and child or adolescent resilience. Some resilience research longitudinally examines the stability and change in resilience from childhood through adulthood (Hauser, 1999); however, it is not yet known how parent resilience affects child or adolescent resilience. Higher-quality parenting can promote resilience to negative mental health outcomes

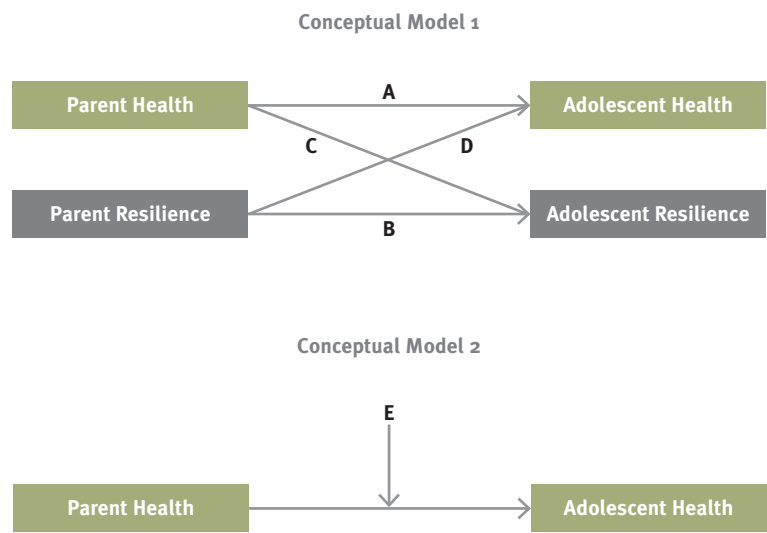
in children (Armstrong, Birnie-Lefcovitch, & Ungar, 2005; Prevatt, 2003), and the effect of parenting remains significant over time (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000). It may be that parents with more developed resilience to the stresses of raising a child may be able to provide more caring, supportive parenting. It may also be, however, that parents with fewer mental health issues provide better parenting to their child. Examining the effect of parental resilience and mental health on the child's resilience and mental health could shed light on the ways in which parents influence their children's health.

In addition, there is some evidence that good parental mental health links to offspring's ability to regulate stress in different environments (Cowen et al., 1997). The ability to regulate stress fits with Block and Block's (1980) early definition of ego-resilience as the ability of a person to modify his or her level of ego-control (control of impulses) as the environment or context changes. Ego-resilience is one way in which youth can successfully adapt to their environment when confronted with risk. Resilience can also manifest in other ways, such as broader personality resilience, social competence resilience, or community-support resilience. Considering the effects of different levels of resilience can lead to a clearer understanding of how adolescents overcome risks and have positive health.

## The Current Study

In the current study we investigated the relations between resilience and mental and physical health in parents and their adolescent offspring. The adolescent's health and resilience was expected to be affected by the parents' health and resilience. We first examined the associations between risk, resilience, and health with our sample of parents and with our sample of adolescents independently. We then tested research questions regarding the associations between parent and adolescent health (Conceptual Model 1, Path A), and parent resilience and adolescent health (Conceptual Model 1, Path D), while controlling for parent and adolescent age, sex, ethnicity, and family socioeconomic status. Next, we tested research questions involving statistical interactions, with resilience buffering the influence of parent health problems on adolescent health (Conceptual Model 2, Path E). The overall goal of this study was to better understand the processes by which adolescents' health is influenced by parental health and resilience.

**Figure 1. Conceptual Models of Parent and Adolescent Health and Resilience**



## Method

### Participants

The sample consisted of 204 adolescent and 173 adult residents of Arizona selected from a larger sample who participated in the 2008 Arizona Health Survey (AHS). The overall sample was intended to be representative of the adult residential population of Arizona aged 18 and older. Of the families that participated in AHS, for each household in Maricopa County that had at least one adolescent, one was randomly selected. In 31 cases, the adult interview was not completed, resulting in a larger adolescent sample than parent sample. The adult with the most knowledge about the adolescent's health and health care was interviewed as the "parent."

Adolescents ranged in age from 12 to 17 with a mean age of 14.6. Each age category (measured in years) had roughly 25-30 adolescents, 107 (53%) were male and 97 (47%) were female. Thirty-five percent of adolescents ( $N = 70$ ) were Latino. Parents of adolescents ranged in age from 27 to 71 years of age, with a mean age of 44.5. Of the parents, 54 (31%) were males and 119 (69%) were females. The majority of households were two-parent (75%). Eighty percent of parents were the adolescent's mother, 14% were the father, 4% were the grandmother, and 2% were unrelated adults. Latino parents accounted for 28% of the sample. Parents' highest level of education ranged from some primary school to professional degree (M.D., Ph.D.) with a mean of "some college." Household income ranged from less than \$20,000 a year to more than \$150,000 with a mean of \$60,000-\$80,000.

### Procedure

The sample was recruited using a telephone list-assisted random-digit-dialing (RDD) approach, the field standard for telephone surveys (Tucker, Lepkowski, & Piekarski, 2002). Prior to screening phone calls, an advance letter was sent in English and Spanish. Households were randomly selected using comprehensive telephone lists, and adult and adolescent residents within households were then randomly selected for participation. Participants were administered telephone surveys by trained staff. Nineteen percent of the parents and 9% of the adolescents chose to complete the survey in Spanish, with the remainder conducted in English. The questionnaire included items assessing demographics, physical and mental health, risk and resilience, health insurance coverage, health care utilization, and perceptions of one's neighborhood.

### Measures

**Covariates.** Parents' and adolescents' sex, age, ethnicity (Hispanic or Non-Hispanic), and socioeconomic status (SES) were accounted for when testing regression models. SES was a mean composite of total household income before taxes and the parent's highest level of education ( $r = .45, p < .001$ ).

**Risk Factors.** Risk was indexed in three ways. Single parent household was considered a risk factor (divorced, separated, not living together, deceased). A second factor was risky behavior. For adolescents, this was a sum score consisting of whether the adolescent ever smoked cigarettes, ever tried marijuana or other drugs, ever had more than a few sips of alcohol, and ever had sex (oral or penetration). Cronbach's alpha for this scale was .78, indicating adequate internal consistency. For parents, risky behavior was indexed by a log transformation (to correct for skew and kurtosis) of days in the last year in which they binge drank (5+ drinks for a male, 4+ for a female), and how much they smoke cigarettes on a three point scale where 1 was "Not at all" and 3 was "Every day." There was not a significant correlation between binge drinking and smoking for adults, so these were kept as separate indices of risk. Abuse, the final risk factor, for adolescents consisted of whether the adolescent had ever been physically forced to have sex or been physically hurt by their boy/girlfriend ( $r = .13, p = .060$ ). For parents, abuse was retrospective and consisted of before they were 18, if an adult had made them afraid/physically hurt them or if an adult had touched them in a sexual way ( $r = .32, p < .001$ ).

**Resilience/Protective Factors.** Adolescent resilience was operationalized in five ways, and parent resilience in four. For adolescents, there was a well-being scale, overall quality of life, parental monitoring, physical activity, and team membership. Parent resilience consisted of the same well-being scale, a resilience scale, overall quality of life, and physical activity.

The well-being scale used was the 5-item World Health Organization's Well-Being Index (WHO-5; Bech, 2004). Parents and adolescents were asked to rate how often during the past month they felt "cheerful and in good spirits," "active and vigorous," "calm and relaxed," "awakened feeling fresh and rested," and "daily life was full of things that interest you." Items were rated on a 5-point scale where 1 was "All of the time" and 5 was "None of the time." After recoding each item so that a higher scale score referenced higher well-being, a mean composite was formed. The Cronbach's alpha for the scale was .61 for adolescents and .79 for parents. Parents and adolescents also assessed their overall quality of life on a five point scale that was recoded so that 1 was "Poor" and 5 was "Excellent."

Parents' resilience was also assessed with six items from the Connor-Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2003). Participants were asked to consider the last 30 days when responding. Sample items included "you tended to bounce back after illness, injury or other hardships" and "you had a strong sense of purpose in life." Respondents rated the items on a 5-point scale (1 = all of the time, 5 = none of the time). After reverse coding each item, item mean scores were created. The Cronbach's alpha (assessing internal consistency reliability) for the resilience scale was .83.

Parental monitoring was the adolescent's report on a five point scale of "About how often is there an adult around during your after-school hours?" The scale was recoded so that 1 was "Never" and 5 was "Always." Physical activity for adolescents was a mean score of how many days in a normal week and how often during the average week the adolescent was physically active for 60 minutes or more ( $r = .75, p < .001$ ). For adults, physical activity was a mean score of how many days in the average week they engage in at least 10 minutes of moderate or vigorous physical activity. Finally, team membership was whether, during the past 12 months, the adolescent had participated on any sports team, yes or no.

**Mental Health Outcomes.** Psychological distress was assessed for both adolescents and parents with the 6-items from the Kessler Psychological Distress Scale (K10; Kessler, Andrews, & Colpe, 2002). Respondents were asked how often during the last 30 days they felt "nervous," "hopeless," "restless or fidgety," "so depressed so that nothing could cheer you up," "that everything was an effort," and "worthless." Respondents rated the items on a 5-point scale that was recoded so that 1 was "None of the time" and 5 was "All of the time." A mean composite was formed, which had a Cronbach's alpha of .69 for adolescents and .80 for parents. Need for treatment was also a mental health outcome. Adolescents and parents indicated yes or no on whether or not they felt they needed professional help for emotional/mental health problems during the last year. Additionally, parents reported on whether they had a diagnosis of bipolar disorder, anxiety disorder, or depression. A sum score of diagnoses was created.

**Physical Health Outcomes.** Physical health for both adolescents and parents was measured by general health, health impairment, and body mass index (BMI). Participants reported on their general health on a five point scale, which was recoded so that 1 was "Poor" and 5 was "Excellent." Health impairment was created by assigning a value of 1 to individuals who had a diagnosis of either asthma or diabetes and a 0 to individuals with no diagnoses. For adolescents, this was then combined with a Z-score transformation of how many days of school they missed due to health reasons in the last 30 days. BMI was calculated by the standard weight in kilograms divided by height in meters squared.

# Results

## Descriptive Statistics and Correlations

Descriptive statistics and correlations for study variables can be found in Table 1 (adolescent variables) and Table 2 (parent variables). Natural log transformations were created for parent mental diagnosis and binge drinking and adolescent abuse, health impairment, and BMI to normalize the distributions; all other variables had normal distributions. Relations of the categorical variables sex and ethnicity to other study variables were examined with t-tests. For parents, younger parents were less likely to be married [t (171) = -2.76, p = .015], had lower income [t (153) = -3.82, p < .001], and reported lower quality of life/well-being [t (171) = -2.46, p = .015]. Latino parents had lower levels of education than non-Latinos [t (170) = -6.70, p < .001], lower income [t (153) = -5.01, p < .001], less retrospective abuse [t (168) = -2.42, p = .017], fewer mental diagnoses [t (171) = -2.31, p = .022], higher BMIs [t (163) = 2.21, p = .031], self-rated lower on general health [t (171) = -2.25, p = .026], and had higher well-being scores on the World Health Organization (WHO) scale [t (171) = 2.08, p = .039]. Seventy-four percent of the parents were born in the United States, 20% were born in Latin America (predominantly Mexico), and 6% were born in other countries. Male adolescents were significantly more physically active [t (201) = 2.96, p = .003]. Latino adolescents had lower socioeconomic status than non-Latino adolescents [t (168) = -5.49, p < .001]. Latino adolescents also had higher levels of well-being [t (199) = 2.08, p = .038], but reported lower quality of life [t (199) = -2.08, p = .039], lower general health [t (199) = -3.49, p < .001], and had higher BMIs [t (188) = 2.16, p = .032].

Correlation values are reported in Table 1 for adolescents. Older adolescents engaged in more risky behavior and were less likely to participate in sports than younger adolescents.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age															
2. SES	.14*														
3. Single Parent	.11	-.12													
4. Risky Behavior	.40***	-.05	.25***												
5. Abuse	.10	-.02	.19**	.23**											
6. Well-being	-.08	-.04	-.20**	-.10	-.11										
7. Quality of Life	.09	.23**	-.27**	-.17*	-.15*	.39***									
8. Parental Monitoring	-.11	-.09	-.24**	-.27***	-.06	.25***	.09								
9. Physical Activity	-.09	-.16*	.01	-.04	.05	.30***	.01	.08							
10. Team Membership	-.15*	.06	-.15*	-.14*	-.05	.13*	.10	.02	.27***						
11. Psychological Distress	.04	-.05	.26***	.07	.26***	-.43***	-.31***	-.19**	-.15*	-.10					
12. Need for Treatment	.03	.04	.18**	.19**	.17*	-.28***	-.16*	-.26***	-.15*	-.18*	.38***				
13. General Health	.10	.24**	-.08	-.15*	-.10	.18**	.33***	.02	.12*	.18**	-.04	-.12*			
14. Health Impairment	-.06	-.09	.09	-.04	.08	-.04	-.15*	-.09	-.04	.01	.14*	.17*	-.01		
15. BMI	.10	-.19*	.02	.10	.21**	.01	-.15*	-.15*	.06	-.08	.01	.11	-.31***	.31***	
M	14.63	9.63	.32	.72	.14	3.65	3.97	4.27	3.68	.49	1.71	.17	3.68	.11	22.06
SD	1.65	2.76	.47	1.17	.35	.57	.95	.83	2.08	.50	.55	.37	.97	.56	5.50
Skewness	-.03	.35	.78	1.61	2.09	.07	-.53	-1.21	-.04	.03	1.43	1.79	-.26	3.68	2.73
Kurtosis	-1.21	1.30	-1.41	1.52	2.40	-.27	-.56	1.45	-1.02	-2.02	3.95	1.23	-.76	17.01	11.95

Note. +p < .10; \*p < .05; \*\*p < .01; \*\*\*p < .001.



**Adolescent Risk Factors.** The risk factors clustered together, such that teens raised in single parent households were more likely to be abused and engage in risky behavior. Individuals who were abused were also more likely to engage in risky behavior. Additionally, adolescents raised in a single parent household reported more psychological distress and felt the need for help with emotional problems. Those who were abused also reported more psychological distress and need for help with emotional problems. Adolescents who were abused also had higher BMIs.

Those with higher risky behaviors also reported a need for help with emotional problems, although they did not report more psychological distress. Risky behavior was significantly related to poorer general health as well.

**Adolescent Resilience Factors.** The measures of resilience clustered somewhat, with well-being correlating in the expected direction with quality of life, parental monitoring, and physical activity and marginally with sports team membership. Sports team membership was significantly correlated with physical activity. Quality of life and parental monitoring did not relate to anything except well-being.

Adolescents high on well-being were less likely to come from a single parent household, had less psychological distress, had less of a need for help with emotional problems, and had better general health.

Parental monitoring occurred more often in two parent households and related to less psychological distress, less of a need for help with emotional problems, and a lower BMI.

Those who were physically active were more likely to come from a low-socioeconomic status home, and reported less psychological distress, less of a need for help with emotional problems, and marginally better general health; whereas those on a sports team were less likely to come from a single parent household, engaged in fewer risky behaviors, had less of a need for help with emotional problems, and had better general health.

Correlation values are reported in Table 2 for parents. Older parents were more likely to have a higher socioeconomic status.

Table 2. Zero-order Correlations and Descriptive Statistics for Parent Report Variables															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age															
2. SES	.32**														
3. Smoking	-.15	-.30*													
4. Binge Drinking	-.02	-.06	.12												
5. Retrospective Abuse	.10	-.05	-.21*	.03											
6. Well-being	-.08	.03	-.01	-.01	-.20**										
7. Quality of Life	.15*	.26**	-.33**	-.07	-.18*	.53***									
8. Resilience	.05	.20**	.07	.01	-.12	.54***	.46***								
9. Physical Activity	-.01	.11	-.29*	-.07	-.02	.24**	.35***	.23**							
10. Psychological Distress	-.02	-.11	.21*	.09	.25**	-.60**	-.57***	-.41***	-.16*						
11. Mental Diagnosis	.03	-.07	-.01	-.33**	.27**	-.37***	-.27***	-.23**	-.13	.41***					
12. Need for Treatment	-.08	.01	.03	.18*	.14*	-.25**	-.28***	-.23**	-.21**	.35***	.37***				
13. General Health	.01	.32***	-.14	-.03	-.21**	.37***	.55***	-.32***	.30***	-.44***	-.25**	-.12			
14. Health Impairment	.19*	-.06	.20*	.25*	.15*	-.17*	-.13+	.01	-.18*	.18*	.26**	.06	-.38***		
15. BMI	-.01	-.06	-.12	-.04	.16*	-.18*	-.15+	-.04	-.17*	.12	.24**	.21**	-.36***	.28***	
M	44.52	9.02	1.81	.82	.28	3.62	3.63	4.24	5.06	1.68	.20	.17	3.49	.55	27.84
SD	7.67	2.71	.97	.72	.45	.66	.95	.64	3.24	.59	.55	.38	1.09	.81	6.60
Skewness	.42	.21	.40	.80	.98	-.49	-.15	-1.08	.44	1.52	3.05	1.80	-.36	1.53	1.68
Kurtosis	.77	1.37	-1.86	-.18	-1.06	.17	-.69	1.11	-.52	2.42	9.65	1.24	-.60	2.17	4.59

Note. +p < .10; \*p < .05; \*\*p < .01; \*\*\*p < .001.

**Parent Risk Factors.** The risk factors were fairly independent of each other. Parents who had experienced abuse as children were marginally less likely to smoke. Parents who had been abused as children also reported less well-being, a lower quality of life, more psychological distress, more mental diagnoses, and were marginally more in need of help for emotional problems. They also reported lower general health, more physical health impairments, and had higher BMIs.

Parents who smoked had a lower socioeconomic status, lower overall quality of life, and were less physically active. Those who smoked also had more psychological distress and marginally more physical health impairment (diabetes, asthma). Parents who binge drank were more likely to have a mental diagnosis and were marginally more likely to need help with emotional problems. Parents who binge drank also had more physical health impairment.

**Parent Resilience Factors.** Parent resilience measures clustered well; well-being, quality of life, resilience, and physical activity were all positively related.

Older parents and those with higher socioeconomic status had higher levels of well-being. Parents with a higher socioeconomic status also had higher quality of life and resilience. Higher levels of well-being, quality of life, and resilience all related to less psychological distress, fewer mental diagnoses, and less need for help with emotional problems. Physical activity related to less psychological distress and less need for help with emotional problems.

All measures of resilience also related to increased general health. Well-being, quality of life (marginally), and physical health were all related to fewer physical health impairments and lower BMIs.

## Testing the Conceptual Models of Association Across Generations

Modeling fitting was done using hierarchical regressions in which adolescent demographics (age, sex, socioeconomic status, and ethnicity) were entered in Step 1, parent demographics were entered in Step 2, and parent predictors were entered in Step 3.

**Parent Mental Health to adolescent Mental Health (PATH A).** Parent mental health diagnoses marginally related to adolescent psychological distress [ $t(10, 159) = 1.88, p = .062$ ] and parental need for help with emotional problems significantly related to increased adolescent psychological distress [ $t(10,159) = 2.32, p = .021$ ]. Parental need for help with emotional problems marginally related to increased need for help with emotional problems in adolescents [ $t(10,159) = 1.96, p = .052$ ].

**Parent Resilience to Adolescent Resilience (PATH B).** Parent resilience measures did not relate to adolescent well-being, quality of life, or physical activity. Parental physical activity was related to significantly less parental monitoring [ $t(11,158) = -2.09, p = .038$ ]. Higher parental quality of life marginally related to increased likelihood for the adolescent to be on a sports team [ $t(11,158) = 1.79, p = .075$ ].

**Parent Mental Health to Adolescent Resilience (PATH C).** Parent mental health measures had no bearing on adolescent resilience. All relations were nonsignificant.

**Parent Resilience to Adolescent Mental Health (PATH D).** Parental physical activity related to increased adolescent psychological distress [ $t(11,158) = 2.20, p = .029$ ] and marginally to increased need for help with emotional problems [ $t(11,158) = 1.67, p = .097$ ].

**Parent mental health to adolescent mental health, moderated by resilience.** Neither parents' well-being, quality of life, resilience, nor physical activity moderated relations between parents' mental health and adolescents' mental health.

## Discussion

The overall goal of this study was to examine the relations between parent resilience and mental health, adolescent resilience and mental health, and the relations of parent resilience and mental health to adolescent outcomes. The constructs very much related in expected directions within adolescents and within parents. Adolescents experiencing more risk factors also experienced increased mental health problems, and were somewhat less physically healthy; whereas adolescents with increased resilience or protective factors experienced fewer mental health problems and were more physically healthy. Relations among parents were very similar. Risk factors related to increased mental problems and decreased physical health, while resilience or protective factors related very strongly to decreased mental health and increased physical health. Parents' mental and physical health also seemed more related than did adolescents'.

Relations from parent to adolescent were less pronounced. Parental mental health problems have often been found to be a strong predictor of offspring mental health problems (Downey & Coyne, 1990; Peterson et al., 1993). In this study, parents' mental health problems related to increased mental health problems for their adolescents, but both parents' mental health and resilience had little influence on adolescents' resilience. Parental physical activity (a measure of resilience) in fact operated in the opposite direction. Parents who were more physically active monitored their adolescents less and had adolescents with more psychological distress and more need for help with emotional problems. A review of child and adolescent physical activity has shown that parent physical activity level is less influential on adolescent physical activity level than variables such as parental BMI, support for the child's physical activity, and direct parental help with the adolescent's physical activities (Sallis, Prochaska, & Taylor, 1999). Studies using devices that measured physical activity at home, however, have found strong relations between parental and child physical activity levels in young children (Moore et al., 1991), so the lack of relations might be attributable to self reported measurement, or age of offspring.

Our finding that parental resilience does not relate to adolescent resilience was somewhat unexpected. The literature has traditionally focused on the ability of parenting behaviors to predict increased resilience in children and adolescents (Masten, Hubbard, Gest, Tellegen, Garmezy, & Ramirez, 1999). Parental resilience (i.e., self-esteem, maturity, relationships with extended family) has also been examined as a predictor of positive parenting (Hess, Papas, & Black, 2002), but few studies examine the relations of parental resilience to adolescent resilience. One study showed that parental pessimism related to child pessimism, and parental depression influenced child optimism, but parental optimism had no relation to child optimism (Hasan & Power, 2002). One explanation for this lack of relation from parent to child or adolescent resilience may be found in the very 'ordinariness' of resilience. Masten (2001) posits that resilient individuals are not born, rather resilient individuals are those who, through a system of dynamic processes – resilience factors interacting with risk factors – experience normal or enhanced functioning. Resilience is therefore commonplace, and is not necessarily transferred from parent to adolescent. Having a parent with low resilience does not mean that the adolescent will have low resilience.

Adolescence is also a developmental period in which many youths rebel or in some fashion alter their behavior patterns in order to assert independence and control. It may be that although resilience is not genetically determined at other age periods, the shared environment parents and children create could produce more inter-generational similarities in resilience. For example, parenting in infancy has been shown to have a strong influence on externalizing behaviors in childhood, no influence in adolescence (16 years), and resumes a strong influence in early adulthood (Lorber & Egeland, 2009). It may be that adolescence is a period of change and differentiation for the adolescent, or that peers (rather than parents) may be more influential on the adolescent.

This study offered an excellent opportunity to examine relations among resilience, mental health, and physical health in parents and adolescents in a representative community sample. There were, however, some limitations to the study. One limitation that could have influenced the significance of the results was sample size. Although the adult sample was quite large, the sample of matched parents-adolescents contained only 173 pairs. Additionally, the data were all self-reported. Parent report on the adolescent (and vice versa) would have been useful for forming composites of study variables. Lastly, parents and adolescents had few matching scales. A stressful life events scale, as well as additional scales focusing on resilience, which could be administered to both the parent and the adolescent, would offer a more clear view of resilience in the face of risk.

Overall, these findings offer a very encouraging view of resilience. Resilience relates to fewer mental and physical health problems among both adults and adolescents, parent mental health relates to adolescent mental health, and parent physical health relates to adolescent physical health. Interventions that target improving parents' mental and physical health should have a positive effect on adolescents' mental and physical health. Enhancing parents' resilience is one way in which to improve their own physical and mental health (likewise for adolescents). Adolescents whose parents have low resilience, however, do not necessarily face a bleak future. Adolescent resilience, as measured in this study, is independent of the parent's resilience. Future studies, with more elaborate measures of resilience, can further examine these relations. Resilience is clearly important, for both mental and physical health, and can be developed in adolescence, regardless of whether the parent is resilient or not.

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