Positive social interaction offsets impact of low socioeconomic status on stress

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Abstract: Background: Stress is associated with unhealthy behaviors and premature morbidity and mortality, especially among those of low socioeconomic status (SES). Clarifying the roles of stress-related risk and protective factors can guide interventions designed to reduce stress and improve health among socioeconomically disadvantaged populations.

Purpose: (1) Replicate prior research showing that lower SES is associated with higher stress in a predominantly racial minority, socioeconomically disadvantaged sample, and (2) test the hypothesis that different types of social support (a protective factor) mitigate the deleterious effects of SES on self-reported perceived stress.

Methods: Low-income patients ($N = 508$, 54% male, 68% African American, $M_{age} = 28$) from a publicly-funded clinic provided demographic information and then completed measures of perceived stress and social support. Four types of social support were assessed (viz., affectionate, emotional/informational, positive social interaction, and tangible). Structural equation modeling tested the hypothesized associations among SES, social support, and stress.

Results: Individuals of lower SES, $\beta = -0.27$ (0.08), $p < 0.01$, and lower overall social support, $\beta = -0.47$ (0.05), $p < 0.001$, reported higher stress. Social support moderated associations between SES and stress, with participants with lower SES benefitting the most from social support. Of the four types of social support that were measured, positive social interaction was the strongest moderator, $\beta = 0.20$ (0.08), $p = 0.01$.

Conclusions: The associations among SES, stress, and social support corroborate prior research. Positive social interaction was particularly important for decreasing stress among socioeconomically disadvantaged persons.

Keywords: Social support■Socioeconomic status■Stress■Resilience■Protective factor

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INTRODUCTION

Individuals from socioeconomically disadvantaged backgrounds, on average, demonstrate worse health behaviors,[1] health outcomes,[2] and die earlier[3] than their wealthier, more educated, and employed peers. One proposed mechanism to explain these health disparities is stress.[3] Greater stress contributes to several unhealthy behaviors for those with low socioeconomic status (SES),[4] with low SES being indirectly related to unhealthy behaviors through perceived stress.[5] Thus, low SES contributes to high stress, and both low SES itself and high stress put individuals at higher risk for unhealthy behaviors. Identifying modifiable protective factors may inform stress management interventions for individuals from disadvantaged socioeconomic backgrounds.

Social support is hypothesized to be a protective factor that mitigates life stress, possibly by contributing to healthy behaviors among socioeconomically disadvantaged individuals.[6-8] One limitation of current research is that social support has not been studied more granularly to understand how different types may help to offset stress for socioeconomically disadvantaged individuals.[9] Types of social support may include affectionate, emotional/informational, tangible, and positive social interaction[10] (definitions and survey questions assessing the four social support are included in Table 1). The current research investigates the role of social support, generally, as well as the role of different types of social support with a sample of mostly low SES and racial minority individuals, for whom stress may be particularly harmful to health.[11]

To replicate prior research in a predominantly racial minority sample living in an urban environment, we examined whether lower SES was associated with higher stress. To extend prior research, we tested the novel hypothesis that social support would mitigate effects of SES on stress. We explored whether measuring the effects of different types of social support could increase the specificity of the hypothesized association.

METHOD

Participants

Participants were patients attending a publicly funded sexually transmitted disease (STD) clinic in a medium

Table 1. Definitions and example survey items of social support types.

Social support type	Definition	Example item (MOS-SS)
Positive Social Interaction	Uplifting encounters with others, perhaps over shared interests	"Someone to get together with for relaxation")
Affectionate	Physical touch and feelings of love	"Someone to love and make you feel wanted"
Tangible	Providing logistic assistance, such as help with a task	"Someone to help with daily chores if you were sick"
Emotional/Informational	Advice giving, problem solving, and emotional validation in a crisis	"Someone to give you good advice about a crisis"

Source: Sherbourne and Stewart (1991), Medical Outcomes Study-Social Support (MOS-SS) survey.

sized city in the northeastern U. S. All were enrolled in a randomized controlled trial (RCT). The RCT was evaluating a sexual risk reduction intervention (citation omitted for blinded peer review). Inclusion criteria for the RCT were age 16 or older and sexual risk behavior past three months. Exclusion criteria were severe mental impairment, current inpatient substance use treatment, HIV infection, and planning to move out of area in the next year. Of 2766 patients approached in the clinic, 2677 (97%) agreed to be screened, 1322 (49%) were eligible, and 1010 (76%) consented and completed baseline surveys. For the RCT, participants were randomly assigned to complete a general health or a sexual health survey at baseline. The current research used baseline data from the participants who completed the general health survey ($n = 508$) because these participants were the only ones to complete items assessing the key constructs of interest (social support, stress). (Readers can consult the parent project for more details; citation omitted for peer review).

Procedures

A research assistant met with patients in a private room and obtained verbal consent for screening. Those who were eligible and interested provided written, informed consent. Participants completed an audio computer-assisted self-interview in a private room. We chose to use this mode of assessment because it yields more reliable data,[12] and allows individuals with lower literacy skills to participate. Participants viewed an intervention video as part of the RCT (unrelated to stress) and were reimbursed $30. All procedures were approved by participating institutional review boards.

Measures

Demographic information. We obtained information on participant demographics; a race dummy variable was created: white, African American, and other.

Socioeconomic status (SES). SES was a latent factor indicated by these categorical variables: annual family income, highest grade completed in school (education), and current employment status. A similar latent variable approach has been taken with SES in previous research[13] citation omitted for blinded review.

Perceived stress. Three items from the Perceived Stress Scale (PSS)[14] assessed stress in the last month: "How often have you felt difficulties were piling up so high that you could not overcome them?", "How often have you felt that you were unable to control the important things in your life?", and "How often have you felt that things were going your way?" [reverse-coded]. Participants rated each item 0 (*never*) to 4 (*very often*); higher scores indicate higher stress. The PSS has been reliable and valid with urban populations[14,15]; in this sample, internal consistency was satisfactory (Cronbach's $\alpha = 0.68$). Items served as indicators of a latent stress construct.

Social support. The 19-item Medical Outcomes Study-Social Support survey[10] assessed perceived support. Participants were asked, "How often is each of the following types of support available to you if you need it?" with responses from 1 (*none of the time*) to 5 (*all of the time*). The scale included four types of support: emotional/informational ("Someone to give you good advice about a crisis"), tangible ("Someone to help with daily chores if you were sick"), affectionate ("Someone to love and make you feel wanted"), and positive social interaction ("Someone to get together with for relaxation"). We summed each type and types served as indicators for a latent social support factor. Following recommendations, each type score was transformed on a 0-100 scale[10]; higher values indicated higher support. This measure has been reliable in racial minority samples ($\alpha = 0.93$)[16] and was also in our sample ($\alpha = 0.97$).