Original Article

Stress and its Social Determinants – A Qualitative Study Reflecting the Perceptions of a Select Small Group of the Public in Sri Lanka

Buddhika Senanayake, Sumudu Indika Wickramasinghe[1], Sisira Edirippulige[2], Carukshi Arambepola[3]

ABSTRACT

Background: Exposure to stress, especially for prolonged periods, can result in physical and mental disorders. To attribute causality to its associated disease profile, social determinants need to be identified at the population level. The objective of this study was to explore perceptions regarding stress and its probable social determinants, among a purposeful cohort of the public from Colombo district, Sri Lanka. **Methods:** A qualitative study using focus group discussions (FGDs) was conducted among adults. Purposive sampling was used to recruit 8--10 participants into homogenous groups. Data were collected until information saturation. A semistructured FGD guide was used to facilitate the discussions. Content analysis methods were used to analyze data. **Results:** Six FGDs consisting of 59 participants were conducted. Participants included primary healthcare workers, community members, village leaders, private and public sector employees, unemployed individuals, homemakers, self-employed persons, slum dwellers, and persons from affluent communities. Three main themes emerged: social, economic, and cultural factors. Social factors consisted of four sub-themes: social role or status, generation gap, disability, and unsafe environment. Economic factors included three related subthemes: poverty, unemployment, and job insecurity. Cultural factors included three subthemes: superstitious beliefs, religion and caste, marriage and dowry. **Conclusion:** Elements regarding stress and its social determinants among the public in Sri Lanka seem to be an amalgam of interconnected sociocultural and economic factors. However, addressing these social determinants in isolation (at an individual level) may not be feasible, as most causes appear to be outside the scope of the individual.

Key words: *Health perception, social determinants, stress disorders*

Key messages: *Social determinants were interconnected, often across sociocultural and economic domains. Most of these factors were outside the scope of the individual's personal purview and therefore, holistic national policy initiatives will be required to assist those affected at the population level.*

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Senior Registrar in Community Medicine, Post Graduate Institute of Medicine, University of Colombo, [3]Senior Lecturer, Department of Community Medicine, Faculty of Medicine, University of Colombo, Colombo, Sri Lanka, [1]Medical Officer, Ministry of Health, Sri Lanka and PhD Candidate, Centre for Online Health, School of Medicine, The University of Queensland, Brisbane, [2]Programme Director (e-Healthcare), Centre for Online Health, The University of Queensland, Brisbane, Australia
Buddhika Senanayake: ORCID Number - 0000-0002-2278-2889

Address for correspondence: Dr. Buddhika Senanayake
160, Prof. Nandadasa Kodagoda Road, Colombo, Sri Lanka. E-mail: buddhikaoffice@gmail.com

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Stress is a basic psychobiological process. It is based on the existence of and exposure to stressors (events perceived as causing stress) and a subsequent chain of escalating events leading to a "stress response." However, how every person responds to each situation is different, and the stress response varies according to the way the stimulus is appraised as a threat. Therefore, stress and its subsequent response experienced by humans is almost always the result of a cognitively mediated subjective experience.[1]

Different aspects of stress have been studied by researchers over time. Extreme entities of stress response such as burnout and post-traumatic stress disorders (PTSDs) have been explored extensively. Burnout has been studied in various occupational categories, including healthcare workers.[2,3] Studies of PTSD have examined the consequences of traumatic events at length.[4,5] However, stress has often been studied in depth combined with a specific physical or a psychosocial disorder.[6-8]

The social determinants of health are defined as conditions, which influence the way people are born, grow, work, live, and age. It further includes the health system they access to attain care.[9] These aspects interact in determining the distribution of health among populations in relation to both communicable and noncommunicable diseases.[10] Studies from several countries have shown that the prevalence of common mental health conditions, including stress, invariably follows a social gradient.[11-13] These determinants are also narrowly correlated to the immediate environment of an individual such as underprivileged social conditions of low income, lower level of education, unemployment, insecure housing, unsafe home and neighborhood conditions, unsafe employment, childhood experiences (e.g., abuse), and poor relationships and social support.[14]

Exposure to social stressors for a protracted period can result in accrual of stress, with probable mental health consequences.[15] Short-term and chronic social stressors have also been identified and illustrated as root causes (social determinants) of mental health disorders.[16] Psychological distress has also been recognized as a significant health-related risk factor for Aboriginal and Torres Strait Islander adults in Australia. Their social determinants of psychological distress were identified as negative perceptions of the residential neighborhood, lack of social support from family, and social and civic distrust.[17] Determinants of psychological stress among Chinese dessert oil workers were occupational stress, burnout, and personality.[18] A study on stress and social determinants of maternal health revealed poverty, food insecurity, lack of access to quality education, and unsafe environments as significant life stressors.[19] However, these determinants are population and context (locale) specific and most likely will differ between countries. Hence, stress (and its social determinants) should be ideally studied relative to the country or the community, with specific knowledge on its traditions, history, culture, belief systems, social norms, and values. Although studies are available to identify stress among populations after a catastrophe such as floods,[20] the stress accrued over the years among seemingly normal populations have not been explored up to now.

Sri Lanka is an island with a population of approximately 21 million, located to the south of the Indian peninsula. In recent times, it is beset with high suicide rates among its population, and the burden of mental illnesses has been recognized as a national priority.[21] Widening income inequality, general rising costs of living (inflation), and the changing social fabric may be some of the reasons for these high suicide rates and also increased stress levels. Although the effects of stress are usually not seen outwardly, they may gradually culminate in increasing numbers of mental health disorders and noncommunicable diseases. Therefore, identifying the social determinants that could lead to stress (hence a predisposition to mental disorders) is crucial, and preventive strategies could be provisioned to minimize the harm caused by these. To date, no study has explored stress and its social determinants among the general public in Sri Lanka. However, it is also important to study these aspects in close relation to the living environments of the population, as it would provide a snapshot of the true state of events. Therefore, we aimed to explore perceptions regarding stress and its probable social determinants among a cohort of the public from the Colombo district in Sri Lanka.

MATERIALS AND METHODS

A qualitative methodological approach was used to conduct this study, as it allowed to understand the contexts of the participant's life in relation to developing stress. The subsequent analysis used thematic analysis through analyzing (transcribed interview) content.[22] Focus group discussions (FGDs) were used as the preferred method of interview, to generate in-depth information on social determinants of stress. The FGDs provided an opportunity for diverse views and experiences of individuals to be outlined and generated a rich understanding of participants' experiences and beliefs. This method also allowed relatively passive individuals (participants), through positive group dynamics, to have the confidence to express themselves.[23]

The study was approved by the Ethics Review Committee (EC-13-180).

Inclusion and exclusion criteria

This study was conducted among adults (>18 years of age) residing for more than 1 year in the district of Colombo. Institutionalized adults (for psychological, correctional, or other reasons), pregnant females, lactating mothers, adult visitors to the area, those with severe psychotic illnesses, and adults experiencing acute stressful events during the 1 month preceding the study were excluded.

Participant recruitment and sampling

Participants were recruited purposefully from a community-health outreach service, conducted by research assistants with the help of local community health workers in selected areas within Colombo district. The smallest administrative unit in Colombo district was (conveniently) selected to include a population subgroup from each socioeconomic sector (identified from administrative data on subdivision of communities for Colombo district): highly urban, urban, and rural. FGDs were conducted in each of these selected administrative units, among a homogenous group of 8--10 adults.

Once a group of 15--20 prospective participants was selected (purposively) by the local community health workers, the research assistants selected every second client for inclusion in the study. As the clinic participant numbers were too large, at the beginning of the study, we decided to include every second client (to have a manageable number for each group). Several of the prospective participants were also included through referrals by community health workers, prior to the outreach service. In this context, purposive sampling was considered suitable in selecting the prospective group of participants, as it helps augment theoretical diversity by selecting information-rich participants related to the phenomenon of interest.[24,25] "Homogeneity" of selected participants was mainly based on their level of education, and this helped to reduce variation in intelligence-level, to simplify analysis, and to facilitate group interviewing.[26] The final number of FGDs depended on the saturation of data, which was determined by the point at which the researcher acquired sufficient information to make a meaningful explanation on the subject of interest.[27] The FGDs were carried out among adults from different socioeconomic groups, as it was useful for substantiation and triangulation of the qualitative data from the different sources, to improve validity.[28]

Interview guide

An interview guide was developed by the research team, with the assistance of subject experts, to conduct each FGD in an open-ended manner *(*online-only supplementary material 1*)*. This guide was useful for the interviews to be repetitively conducted (and data to be collected) similarly across the different domains of inquiry.[28] The panel of subject experts comprised of public health specialists, psychiatrists, psychologists (two each), and a medical anthropologist.

Focus-group discussions

Each focus group was conducted by one facilitator, one cofacilitator, and one or two note takers (research assistants). A place convenient for the participants (either the community center or local government administration office), with minimum disturbance, was arranged for each FGD with the help of local community health workers, on the same day of recruitment. The FGDs lasted between 60 and 90 min (average of 75 min). Discussions were audio-taped and subsequently transcribed verbatim. All questions in the focus group guide were written on an easel pad for participants to refer to during the discussion. During the sessions, the facilitator read each question and followed the interview guide with frequent prompts for probing in order to make sure that important aspects were fully deliberated.

Analysis

Content analysis methods were used to explore the perceptions of the study participants and to identify themes.[29] The discussion transcripts were coded in an open-ended manner by hand, after reading carefully, to gain a deeper understanding of the contexts. These initial codes were reviewed closely and categories generated. Finally, the categories were reviewed for developing overall themes. Suitable quotations were selected and extracted to illustrate the main findings. A final review of codes, categories, and themes was conducted to exclude any oversight of any important information.[30] During open coding of the comments made by the participants, a list of social determinants affecting stress was identified (directly or through interpretation). Findings are described narratively.

RESULTS

Six FGDs were held, with a total of 59 participants. The participants included village leaders (n = 4; 6.8%), retired private and public sector employees (n = 6; 10.2%), unemployed individuals (n = 6; 10.2%), housewives (n = 12; 20.3%), self-employed adults (n = 7; 11.8%), slum dwellers (n = 8; 13.5%), adults representing the affluent communities (n = 6; 10.2%), primary healthcare workers (n = 5; 8.5%), and other members from the community (n = 5; 8.5%). The

mean age of participants was 42 years (SD +/− 10.2), and the majority of them were females (52.5%). The education level was either secondary education or less in nearly half (50.8%) of the participants. Only 14% belonged to the older age group (of 60 years or above).

Social determinants of stress

A list of the key social determinants, as identified by the participants as probable causes for their stress, is provided in Table 1. Short verbatim quotations from the participants are presented as evidence for the interpretation of data.

Themes

Content analysis of the focus group interviews identified three main themes related to the social determinants of stress as identified by the participants. These were social factors, economic factors, and cultural factors. Within each theme, several subthemes were also identified [Table 2]. The comments made by the participants were grouped into these themes and subthemes [Table 3].

Theme 1: Social factors

Four subthemes were identified within this theme. They were social roles or status, generation gap, disability, and unsafe environment.

Social roles or status

Participants described how "immediate society" (extended family, neighbors, or work community) defined individuals by the type of work they engaged in. This meant that some participants felt constrained (or uncomfortable) to interact with others outside their immediate environment. Therefore, the type of occupation was clearly identifiable as a stressor when interacting in society, especially for those occupied in taboo (or low-level manual) work. Participants representative of occupations such as three-wheel drivers, masonry workers, and garbage collectors stated that they felt society was judgemental (often negatively) of them, purely on the basis of their occupation. The type of household, assets owned, and commuting in a "luxury" vehicle were perceived as symbols of high social status. Many of the participants made attempts to fit into the expected roles and status within their immediate "high" society, disregarding the basic needs of their family. This meant that some participants endured significant stressors when realizing their aspiration to be included in the "igh" social status group. Those who were of the view that they had lower social status complained about reduced social interactions they had, due to the perception that they were ignored (as inferior) by others.

Table 1: Social determinants of stress as reported by participants

Probable determinant of stress	Example (Quote or interpretation)
Poor living conditions	"Stress depends on the place you are born and the place you live. A person in a developed country lives longer than a person living in an African country. The difference may be (even) one or two decades. Not only among countries, but also within countries there is a marked difference in life expectancy among different regions"- 52-year-old male working as a clerk in a public sector institution
Social problems	"I do not wish to live with my husband anymore. He is a severe drug addict. I can have a separate independent life with my children. But my parents, close relatives, and friends force me to continue the marriage." - 31-year-old mother of two children
Childcare responsibilities	"I am a widow and I am looking after three (grand) children. Two of them are going to school. They belong to my son. My son is working as a laborer in a construction site. He visits home once a month. Children's mother (daughter-in-law) is abroad (working) for the last three years and there has been no communication from her in the past 1 year. I am going to take care of these children as long as I can. But what will happen to these children after my death?" - A 70-year-old grandmother from the rural sector
Use of harmful narcotic substances (and illegal alcohol)	"My husband works as a manual laborer in a rubber state. He drinks "kassipu" (a local illicit liquor product) - half a bottle every day during last 2--3 years. He does not provide adequate money for household work and for children's education. Therefore, I work as a domestic servant (maid) in a close by house to help with the basic expenses. - A mother of two children (aged 9 and 5) from a rural area
Health services	"In the 18th and 19th centuries, the TB caseload was very high in Western Europe and North America. The number of cases has reduced drastically with the improvement of personal hygiene and socioeconomic status of these societies, even before the first anti-TB drug was discovered' - 68-year-old retired male doctor
Inconsistent educational policies	Educational policy reforms should be encouraged at national or at provincial levels. Participants critiqued education policy. "The competitiveness of people for survival was initiated from this education system. They develop individuals who can compete well, but who lack socio-environmental and life skills. The competitiveness of the current society may be due to the poor educational system. They fail to meet the demands of employment skills and needs. As I know, persons who passed G.C.E A/Levels are working as laboratory attendants. Graduates who have completed a degree are posted to receptionist posts in public institutions. This is a waste of national money and resources."- A retired bank executive.
Poor governance	Good governance was identified as a key determinant for the socioeconomic, cultural and political stability of a country. The demise of law and order of the country could adversely affect health outcomes. Most participants stated that law enforcement in their area on most occasion, was poor. "Equitable law and order with good governance is a must."
Inconsistent government policies and programmes	Consistent economic, health, social, and educational policies should be established with immediacy to minimize the undesirable effects social determinants of stress have on the general public. "Not having a consistent policy is bad, anyone can do whatever they want and justify it without any accountability and scientific basis." - A retired school principal

Table 2: Social determinants of stress: Themes and subthemes

Themes	Subthemes
Social factors	Social roles or status
	Generation gap
	Disability
	Unsafe environment
Economic factors	Poverty
	Unemployment
	Job insecurity
Cultural factors	Superstitious beliefs
	Religion
	Cast, marriage and dowry

Participants described how in Sri Lankan society, traditionally the social role defined for females was to be a "home-maker," that is, to prepare meals, care for the children, and to carry-out household chores. Many female participants found it difficult to deviate from this traditional and set role. Furthermore, many of them were economically dependent on their husbands, who in turn expected their wives to fulfill the traditional role of being a housewife. Furthermore, most women participants did not have the opportunity to engage in any gainful employment, due to a lack of relevant skills or opportunity. This traditional role for females in society meant that their financial vulnerability was higher.

Generation gap

The "generation gap," the age difference between parents and their adult children, was a reason for some disagreements. The related disputes sometimes included extended family as well. For some female participants, a conflict with in-laws, when living within the extended family setting, was a concern. Constant arguments and disagreements led to the accrual of stress (and anger), and during acute periods of disharmony, stress levels were intense. According to some participants, the social norm was that "the extended family should be promoted with mutual understanding among all family members." However, many female participants found disharmony within the family often, attributing it to the difference in perceptions stemming mostly from the age difference between older adults and the younger generation (generation gap).

A 34-year-old lady stated,

> "We are living with my husband's parents, and they interfere too much into our family issues. I do not have any freedom to cook what I want or to decorate the home as I would like."

Disability

Participants with a disability felt that they were unfairly discriminated in society due to their incapacities, and this was stress-causing. Their routine activities of daily living (shopping, banking, going to the cinema, etc.) were compromised (or difficult) as the access to premises (public and private) was difficult, owing mostly to poor facilities. One participant with disability stated that though regulations and policies supported favorable infrastructure to be developed for disabled people to access public buildings easily, facilities were yet to "catch up."

Another factor for stress among disabled participants was the type of disability. Disability subsequent to diseases with an attached stigma element, such as elephantiasis, was alienating for some, especially when outside their home environment.

> "I have a heavy right leg due to filariasis. It makes it difficult to perform my daily activities. When I go to a public place, everyone looks at my leg and try to ignore me."

Some participants also identified issues related to sexual and reproductive health as another factor causing stress. Sexual dysfunction was identified as a reason for discriminating the male partner within the family unit, a major obstacle for the psychological well-being and marital harmony of one participant.

Unsafe environment

Insecure living environment (in slums or in new developments close to slum areas) was cause of stress for many participants from urban communities. New developments for housing or establishment of an industrial estate in an already highly urbanized region created significant stress for the long-term occupants of the area. These new developments made the inhabitants of the area feel insecure and (somewhat) discriminated. Adverse and illegal activities within the slum environments (narcotic drug trade, illegal liquor trade, etc.) made some settings insecure and socially undesirable (described as "notorious areas of trouble"). Parents had concerns for their children when living in or close to insecure environments, as it sometimes led to discrimination of their children when outside their community, for example, when the children were at school. Furthermore, the social connectedness within such communities was nominal as people feared interactions or community activity.

Theme 2: Economic factors

Various views related to economic factors affecting participants were clustered in this theme. Three related subthemes were also identified. These were poverty, unemployment, and employment insecurity.

Poverty

Participants commented on the constant difficulty in being financially secure. This was identified as one of

Table 3: Social determinants of stress as reported by participants

Probable determinant of stress	Quote(s) or interpretation(s)
Social factors	
Social roles or status	"As a professional, I have to maintain my social status. Everyone expects that. Therefore, I have constructed a big house (three floors) with all modern facilities and bought a brand new vehicle. I took a housing loan and a vehicle loan from two private banks. A large portion of my salary is deducted from the bank loans and therefore, I have to work overtime. I work from early morning until late evening and this routine schedule has been continuing for the past 6-8. People may think that we have money, but most of the things we got are from bank loans." - A 45 year old male professional
Generation gap	"I married four years ago and I do not have any children yet. I worked as a management assistant in a state ministry before marriage. After marriage, I resigned from the job. My husband influenced me a lot to do so, as he feels it would affect our family life. We are living with his parents and they interfere too much with our family issues. I do not have any freedom to cook what I want and to decorate the home as I would like."
Disability	"All my family members including my grandmother, mother, and sisters are obese. I have undergone extensive diet schedules and several treatment plans. I got discouraged as people used to laugh at me and made comments when I exercised. People use nicknames to identify me in the workplace. During busy hours, even bus conductors were reluctant to let me use the public transport." "I met with an accident three months back and fractured my right leg. I can't walk now and I am using a wheelchair. I am unable to use public transport and public premises (hospitals, government officers) because they do not provide separate access to wheelchairs." - A 40-year-old businessman living in an urban area
Unsafe environment	"I have a teenage daughter and a teenage son. They want to go and play in the park. But I cannot send them out because of the unwanted things happening near the park. Some people are drunk and some make bad remarks to young people. There are illegal drug distributing centres and narcotic drugs are also exchanged. I strongly oppose their request to play in the park. I have to protect my children." - 36-year-old mother from low-income setting in a highly urban area
Economic factors	
Poverty	"I am a widow and I am looking after three children. Two of them are going to school and they belong to my son. My son is working as a laborer in a construction site. He visits home once a month. Children's mother (daughter-in-law) is abroad working as a domestic servant in a middle east country for the last three years and there has been no communication from her in the past one year. I am going to take care of these children as long as I can. But what will happen to these children after my death?" - A 70-year-old grandmother from the rural sector "My husband works as a manual labourer in a rubber state. He drinks "kassipu" (a local illicit liquor product) - half a bottle every day during last 2-3 years. He does not provide adequate money for household work and for children's education. Therefore, I work as a domestic servant in a close by the house to help with the basic expenses. - A mother of two children (aged 9 and 5) from a rural area
Unemployment	"I graduated from a leading state university in Colombo two years ago. I have tried my best to find a job according to my academic qualifications. I have applied for more than 1,000 jobs in the past 18 months with no success. I am frustrated because I was unable to find a job according to my credentials. People suggest me to go behind politicians and try to find a job. I cannot plan my life without a permanent job." - A 30-year-old male from rural area
Job insecurity	"I have done three jobs for the last 1 year. I worked as a three wheel driver for two months, part-time sales man for three months and I am currently working as a helper for a construction site. All of these jobs are contract basis, part-time, or freelance. I do not have a permanent income and currently receiving a low wage. These jobs lack pension plans, sick day leaves, predictable income, or anticipated schedules of work." - A 33-year-old male from semi-urban area
Cultural factors	
Superstitious beliefs	"I have three children. Two of them got married. My main concern is my daughter who is still unmarried and will be 33 this year. She is pleasant, well-educated, and working in a private firm. My main issue is to find a partner for her. My family astrologist said that according to her horoscope, it would be a difficult task to find a suitable partner for her. My husband advised me to go ahead with marriage without considering this horoscope or astrological guidance, but I am reluctant to do against that." A 58-year-old mother living in an urban area "I am the only son in my family and did my secondary education in the science stream. I strongly oppose astrology as a science and consider it a myth. When I got married two years back, I intentionally did not match the horoscopes and did not believe in any auspicious time prepared by the astrologer. I changed those auspicious times according to my convenience and got married. My first son was born 1 year back and on the same day, my father got a heart attack and died the next day. After three weeks, my mother also passed away. A lot of my relatives point their finger at me for the cause of these sudden deaths. So, now I have a guilty feeling about myself." A young man from a semi-urban area (30 years of age)
Religion	"According to the culture of our ethnic group, several families are living in one household. We do not have the independence to carry out family-related matters according to our plans as all other members interfere with it. Not only that, the privacy for us is also less". A young female (26 years) from a minority ethnic group
Caste, marriage and dowry	"I do not wish to live with my husband anymore. He is a severe drug addict. I can have a separate independent life with my children. But my parents, close relatives and friends force me to continue the marriage." - 31-year-old mother of two children "I am a member from a lower caste. People treat us inferiorly; neglect our rights; do not value our services; they won't allow us to come to certain social functions. Our children are neglected from school and ultimately they dropout from education system. The caste system makes people exposed to prejudice, stereotyping, etc, and it is a social evil. This cannot be eradicated without changing the mind-set of the people in the society." "I got married three years ago. My father did not have much money to give as a dowry. Before marriage my husband did not expect any financial benefits from me. But few months after the marriage my husband started harassing me to provide a dowry. He shouted/screamed at me. It was a severe physical and emotional abuse. I got divorced six months back and I lost my whole life. I never expected that" - 27-year-old mother of one child

the main (or the most important) determinants of stress. A perception of being inferior was seen among the poor with a feeling of not being in control of their life. People living in poverty (as identified by themselves) described how they struggled to pay for food, accommodation, clothing, education, healthcare, transport, or recreation. It was described as an "unending struggle" to meet the competing demands with a limited income.

> "My husband is a part-time manual laborer, and we have three children. We do not have enough income to live. We are struggling for the survival of our family."

In extreme circumstances of poverty, some parents willingly involved their children in manual labor, during some aspects of their work (e.g., masonry, cleaning services). This meant that these children were sometimes exposed to risks such as physical or sexual abuse, especially during times when parents were unavailable.

Unemployment

Participants described unemployment as a "most devastating experience" as they felt insecure and discriminated. Being unemployed was described as directly associated with economic instability and stress.

> "I completed my degree 8 months back and ever since, I am looking for a job. Currently, I am spending all day searching online for job opportunities and more short-term ways to make money. I fear that if I stop the search and watch TV, I'll miss some job opportunities."

Unemployment made some participants feel uncomfortable to interact with their immediate social environment and embarrassed when with family. It led to isolation and severe psychological distress. Some participants described situations where it had sometimes led to severe consequences such as depression and suicide among friends.

Job insecurity

Employment insecurity was identified as an important workplace stressor by many participants. They expressed that job insecurity, which is a subjective perception, is due to labor-hire factors in their current workplaces. Some argued that it was due to the mismatch between employee capabilities and employer expectations. This issue had serious consequences for some, as it led to feelings of insecurity and dissatisfaction. Some participants stated that job insecurity was also linked to issues related to productivity and profits. These perceptions were also associated with low employment satisfaction, poor psychological wellbeing, and increased physical symptoms (weight gain, headache, etc.).

> "I have been working for a private company, on a contract basis, for 3.5 years. They do not have any intention to make my appointment permanent. I do not have the luxury of gaining the benefits the company provides their permanent staff. Actually, I lost interest in this job and have started searching for a new one."

Theme 3: Cultural factors

Superstitious beliefs

Cultural practices related to superstitious beliefs were also identified as important determinants of stress among the participants. They stated that, traditionally, Sri Lankan society placed faith in astrology and horoscopes (charts) for predicting the future for individuals, communities, country, and even the "whole universe." Several participants assumed that it was vital to consider the astrological perspectives (assuming that it was a "time-tested science for centuries") prior to engaging in any important activity. This meant that planned actions were often directed by astrologers, and for the non-believers, this created significant stress. Even though the majority of participants interviewed were believers of astrology, a few were strongly against these concepts and said that it destroyed motivation of an individual and allowed the mistaken belief that an "alien planet" from far away could influence them. The believers argued that the potential risks of challenging the cultural norms and values far out-weighed the simplicity of simple acceptance.

> "If you challenge (astrology), you should get ready to face the consequences and repercussions."

Religion

Religions with strict regulations were also a stressful issue for some participants. Younger generation was increasingly reluctant to submit to these religious regulations, and they made them feel stressed. The pressure from elders, religious leaders, and religious (or faithful) peers forced them to conform to certain religious traditions such as attending prayer, appropriate dress, leisure activities, etc. Most of the participants in the rural sector believed in a broad pantheon of gods and that some spirits and demons helped them during stressful times.

Participants (especially from the Buddhist faith) believed that actions (good or bad) in the past trailed one as "karma," with a potential to significantly change their lives in the future. They stated that good karma would lead to a prosperous future and that bad karma could cause harm (at least eventually). Some participants had used several cultural approaches to assess their "karma level" (through astrologers) and to seek advice from gods "to make their lives happy" and

to minimize stress. A few participants described how they had learned from their parents to place faith in fate and karma since their childhood.

Caste, marriage, and dowry

Participants described how culturally and traditionally accepted concepts such as "caste" and "dowry" also were a causality to stress, mostly during times of marriage of young females. Since marriage was often considered a family event, the stressors associated with the marriage (costs, preparation of dresses, etc.) included all family members. However, this extended process often led to the isolation of the young female within the family (without being able to express personal feelings) at a time of need for guidance. Participants described that in the Sri Lankan context, marriage was considered an important social phenomenon, dissimilar to Western societies where the concept of divorce, separation, and living together prior to marriage are considered typical occurrences.

Informal norms of society forced married partners to stay together even during incompatibility or disharmony, by emphasizing the importance of responsibility and respect. Mothers who had young children were especially bound by these informal norms, as it was seen as their responsibility to look after the children and separation from the partner was not encouraged. This led to some females feeling isolated within their marriages even though their partner was simply "physically present."

Although discrimination according to caste is relatively less in the modern era, it is still prevalent in some communities when social events such as marriage and related cultural gatherings are concerned. Some participants from lower castes (as identified by themselves) felt that they were often discriminated in society. They felt that the type of employment they were in (e.g., garbage collectors) made them inferior to the others. Participants expressed that an isolation from the rest of the community was also a cause for stress.

DISCUSSION

This is the first qualitative study of this type conducted in Sri Lanka. We attempted to identify the social determinants of stress among the general public in Sri Lanka. The study identified social factors (social status, generation gap, disability, and unsafe environment), economic factors (poverty, unemployment, and job insecurity) and cultural factors (superstitious beliefs, religion, caste, marriage, and dowry) causing stress among adults.

Previous studies conducted in other, mostly developed, countries have shown that psychological distress was greater in the lowest wealth quintile, wealth inequalities correlated with distress.[31,32] Although in developed countries the higher level of stress was well allied to the lower social strata, this study showed that in Sri Lanka, both upper and lower extremities of social strata experienced high-stress circumstances, though the issues escalating stress for either social strata were dissimilar. One of the reasons for the low social strata to live with high stress could be the low financial safety net (benefits) and poor social security systems in developing countries. Continuity in work (often long hours in manual labor) was necessary for the poor to maintain a good quality of life as compared with the richest quintile, which often adversely affected their family ties and social relationships. Furthermore, individuals from the poorest quintile may be chronically stressed due to this social deprivation and poor social capital. "Social status index" developed by De Silva makes an attempt to measure social status according to the Asian cultural context.[33] De Silva *et al*. showed that a traditional healer in a rural village had a higher social status despite having poor financial income compared with an illegal drug seller with multiple financial assets. This example clearly shows that social status needs a deeper inquiry, interpreted with caution, considering prior knowledge, culture and social background of a particular individual. Similarly, intergenerational poverty and racism are identified as unique social determinants of stress among indigenous people living in Australia.[34]

Unemployment is another social determinant closely linked with stress.[35] A vicious cycle is created when unemployment leads to poverty, with a well-correlated dose--response relationship between income and health.[36] Our study showed that poverty and unemployment were significant determinants for stress among the communities included. Previous research has shown that unemployment leads to illness and premature deaths.[37] Furthermore, undesirable consequences of poverty affect early childhood development and have the potential to thereby influence subsequent generations.[38] Investment in poverty reduction is uniformly identified as a successful preventive strategy for psychological stress.[39] Some participants of this study clearly described unemployment as the most devastating experience in the matrix of factors affecting stress. Therefore, from the perspective of governance, strategies for poverty reduction and employment placement through training and retooling of the labor force are imperative for mitigating stress among citizens.

One of the most important findings identified through this study was that marriage and its related

factors (caste and dowry) were stress-causing to both the individual and the family. Caste is a way of cultural segregation of people, and it is traditionally determined by birth. This segregation creates an internalization of prejudice and long-lasting discrimination, with impaired individual self-esteem.[40] This traditional concept is increasingly challenged in modern society, possibly due to rapid globalization and the importance placed on individual skills and work performances.[41] Our study showed that these traditional practices were still persistent in some Sri Lankan communities, causing substantial stress to some participants. Policies such as equity in education and equal employment opportunities may minimize these cultural barriers in times to come. In this context, legal policy makers (at the local and national level) should recognize the depth of self-depreciation which adversely affects society and remedial measures should be taken through legislative protections.[40] Research shows "dowry" as another complex culturally determined concept that has led to sex-selective abortions, female infanticides, and neglect of daughters.[42] In some cases, it directly relates to domestic violence and severe psychological stress, resulting in mental disorders.[43] This is observed not only among females of this study but also in previous studies where African American men had identified race, ethnicity, and marital traditions as crucial cultural determinants for their stress.[44] Importantly, evidence shows that legislative prohibition *per se* is ineffective in tackling these complex problems. A holistic approach using human behavioral ecology could provide positive motivations in contesting these cultural barriers.[42]

This study identified an unsafe environment (neighborhood) as a determinant of stress among the participants. Weich and Lewis showed how insecure housing conditions could cause extensive psychological morbidity.[45] The effects of the built environment and the quality of relationships between people of the neighborhood are a crucial determinant of stress.[46] This was further supported by a study conducted among Australian aboriginal communities, where negative perceptions of the residential neighborhood, lack of social support from family, and social and civic distrust had caused significant community stresses.[17] Resultantly, the National Aboriginal Health Strategy Working Group recognized how indigenous communities living in rural Australia required self-esteem, dignity, justice, and control over the physical environment as crucial determinants for mitigating stress.[47] Furthermore, strategic urban planning is well-identified as a policy level solution to create safe environments and minimize community stress levels.[48]

This study has many strengths. This was a study on perceptions of social determinants of stress in a multiethnic, multicultural district in Sri Lanka. The participants represented all social strata of the community, representing both urban and rural sectors. The qualitative study method was useful as it allowed the participants to express their feelings freely, unlike in a closed assessment. The data gathered in the focus groups achieved informational saturation, and therefore, the findings from this study could be described as an accurate representation of the community perceptions of social determinants of stressors affecting adults in the community. This information may be applicable to other countries in the region through common links shared on the identified social determinants. Importantly, the results of this study will enhance support to policy formulation in relation to health as well as non-health sectors to gain positive health outcomes at the population level.

One limitation of this study was the purposeful sampling. This increased some bias, as it is likely that "health-seeking" clients were identified. However, participants who were frank in stating their opinion needed to explore the perceptions accurately. Another limitation would be that all areas of Sri Lanka could not be included (resource limitation). Since the focus groups were conducted in the local language (Sinhala), participants who were not fluent had to be excluded.

CONCLUSION

Social determinants were interconnected, often across sociocultural and economic domains. However, several of these factors were outside the scope of the individual's personal purview, requiring management of societal expectations. This means that individuals suffering from stress might not be able to mitigate stress-causing events by themselves alone. Therefore, strong social support programs, inclusive economic development programs, public counseling services (free of charge at the point of delivery), and holistic national policy initiatives will be required to assist those affected.

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Conflicts of interest

There are no conflicts of interest.

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