Health-Related Behaviors and Social Media Usage in Young Adults: Mediating Role of Coping Strategies during COVID-19 Smart Lockdown

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Abstract

The study investigated the association between health-related behaviors, coping strategies and social media usage in young adults during COVID-19 smart lockdown as well as the mediating role of coping strategies between the relationships. It was hypothesized that coping strategies mediates the relationship between health-related behaviors and social media usage in young adults during COVID-19 smart lockdown. Through purposive sampling technique, data from (N=300) young adults with age range 18-35 years (M=23.67, SD= 3.78) was collected from three private universities of Lahore. For data collection, lifestyle behavior change questionnaire by Chopra et al. (2021), coping scale by Hamby et al. (2013) and social networking usage questionnaire by Savita and Liyaqat (2018) were used. For the analysis, Pearson Product Moment Correlation, Mediation analysis, independent sample t-test and Analysis of variance were used. Coping strategies significantly mediated between health-related behaviors and social media usage in young adults during COVID-19 smart lockdown. Findings have practical implications for the expansion of different strategies for other population like adolescents, old age people, teachers, parents, and doctors, expecting to cope better with others during stressful or traumatic events.

Keywords: Health-related behaviors, Coping Strategies, Social Media Usage, Adults, COVID-19

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Introduction

Health-related behaviors are particular characteristics that can improve or harms physical, psychological, and social wellbeing now and in the future of individuals. Individual's potential and their functioning are largely determined by the choices an individual makes about their lives are based on their health-related behaviors. Health-related behaviors are categorized into two main broad classes that are: health-supporting behavior and health-damaging behavior (Havigerova et al., 2019; Slavich, 2020). Health-supporting behaviors are basically the positive activities that assist the person and lead towards the good health. These positives activities improve health, inhibit illness, identify disease or issue on time, detect any sort of disability at the earlier stages, and guard from jeopardy of injury (Samal et al., 2017). Health-damaging behaviors are those activities that are carried out by people which can increase the risk of illness, whether or not individual is having knowledge of the association between the

activities and illness. These activities do not contribute to good physical and mental health including inappropriate eating habits, lack of sleep, alcohol consumption, and poor hygiene, no physical exercise and safe sexual behaviors (Ntoumanis et al., 2020).

Coping strategies refers to the particular approaches which are used by individuals in diverse circumstances which change over the period of time, and are also liable on the elicited conditions (Cattelaens et al., 2019). Active coping incorporates systems like arranging, making a particular move, looking for help, positive reappraisal of the circumstance, or acknowledgment (Freire et al., 2020; Gustems-Carnicer et al., 2019). Avoidant coping strategies are those which include intellectual and social systems used to dodge the distressing circumstance, like interruption, refusal, and living in fantasy land (Tran et al., 2019).

Social media is based on different applications and websites that permits the users to create and post diverse life related contents and allow them to participate in networking world, where they can meet people virtually (Ramos et al., 2019). The most common applications of social media are Facebook, Whatsapp, Instagram, Snapchat, Twitter, and You Tube (Abbas et al., 2021). Social media as a set of virtual applications and tools that carry ways of interactions and communications for digital media operators by helping and providing knowledge on social media platforms. It has positive and negative outcomes which affect the individuals (Hassen & Kibret, 2016).

The theoretical framework of the research was grounded on the theory of planned behavior by Ajzen (1991) which is based on these constructs: Attitude, behavioral intention, subjective norms, social norms, perceived power and perceived behavioral control. The coping circumplex model by Stanistawski (2019) model is based on eight coping styles and created a circumplex:

positive emotional coping, efficiency, problem solving, and preoccupation with problem, negative emotional coping, helplessness, problem avoidance and hedonic disengagement. Social media engagement theory by Di Gangi and Wasko (2016) model centered on user experience, user engagement and their usage.

Literature Review

Social media was the first choice of people for getting information related to COVID-19 and health concerns (Gecer et al., 2020). Social media usage was more common in young adults, they used it for various reasons and the main reasons were to handle the situation better and explore things related to healthy lifestyle behaviors (Al Mamum & Griffiths, 2019). Positive approach towards the traumatic condition was the main protective factor to keep themselves healthy (Babore et al., 2020). 80% of the students took better precautions related to COVID-19 nervousness as they had knowledge and they strictly followed the precautions, focused on health-related behaviors and took precautionary measures (Baloran, 2020). Young adults reported that they used different social media sites to cope better during the stressful time of their lives by familiarizing themselves to new activities and they used diverse sites of social media as a tool for coping to deal with stressful event (Fernandes et al., 2020; Pahayahay & Khalili-Mahani, 2020). Different social media applications like Facebook, Snapchat, Twitter, WhatsApp and YouTube etc. were the most important sources for sharing healthy behaviors, unique activities and information with others during COVID-19 or during COVID-19 smart lockdown (Hussain, 2020).

Adults who implemented altered coping strategies and kept themselves busy in various healthy activities including aerobics, walking, gardening and followed their daily life interests, enjoyed their stressful time and

they enjoyed optimistic effects (Lades et al., 2020). Young adults used social media and technology for educational and creative purposes, and they were engaged in different activities by getting ideas from social media and coped best by using humorous memes with others (Cauberghe et al., 2021; Garfin, 2020). Further, young adults increased their use of social media as compared to pre-COVID-19 pandemic. Moreover, findings of a research showed that there was no specific social media platform which was directly associated with the coping strategies, health knowledge and physical activity (Tarqi et al., 2020). Young adults focused on emotional and problem based coping strategies for dealing with stressful events in their lives (Baloch et al., 2021). People used religious and active coping to help the humankind and handled the stress level related to COVID-19 lockdown (Munawar & Choudhry, 2021; Salman et al., 2020).

Social networking sites and their applications presented enormous benefits for both non-professionals and professionals during disturbing lockdown of COVID-19 (Haggag et al., 2021). Working people reported professional usage rates of 100% on the internet, 89% on apps, and 46% on social media. For professional use, they spent average 30 minutes per day on the internet, 10 minutes on apps, and 15 minutes on social media other sites. Furthermore, (94%) used digital media for communication with colleagues and 23% for communication with others. It was increasingly noticeable that social networking sites and their applications presented enormous benefits for non-professionals university students (Abbas et al., 2021).

Social media usage and birth order have a significant relationship. Further, findings of a research concluded that internet addiction and birth order act with each other in locus to anxiety of students (Yang et al., 2021). Additionally, Marano (2017) observed Adlerian theory (1964) and suggested that birth order and the number of siblings affect a child's potential. Also, findings concluded that an individual's own perception of his or her birth order is more important than the actual order. This psychological perception of birth order can be impacted by multiple factors (Jambon et al., 2019).

Rationale of the Study

It is very important how we take care of our health when daily routines have been disturbed. During many smart lockdown, people used different strategies to cope better with the stressful time of their life (Moore & March, 2020). Due to the threat of COVID-19 and its smart lockdown, social media communication goes beyond the delivery of messages and helps in developing the strong sense of disease prevention. Individual adapt different coping strategies, promote healthy behaviors and they moved to virtual world (Zhong et al., 2020). Therefore, the current research was designed to investigate the association between these important variables, health-related behaviors, coping strategies, and social media usage in young adults during COVID-19 smart lockdown.

Objectives of the Study

1. The main objective of the study was to examine the relationship between health-related behaviors, coping strategies and social media usage in young adults during COVID-19 smart lockdown.
2. Whether coping strategies mediates the relationship between health-related behaviors and social media usage in young adults during COVID-19 smart lockdown.

Hypotheses

1. There was likely to be a significant relationship between health-related behaviors, coping strategies and social media usage in young adults during COVID-19 smart lockdown.

2. Coping strategies mediates the relationship between health-related behaviors and social media usage in young adults during COVID-19 smart lockdown.

3. There was likely to be a significant difference in status of participants and social media usage in young adults during COVID-19 smart lockdown.

4. There was likely to be a significant difference in the birth order of young adults and social media usage during COVID-19 smart lockdown.

Method

Sample and Sampling Technique

A sample of N=300 (aged 18-35 years) young adults through purposive sampling technique were taken from three different private universities of Lahore with equal distribution on the basis of gender. Regular university students who must use more than 3 social media sites (Facebook, Instagram, YouTube, Snapchat, WhatsApp etc.) on daily basis, must have 12 years or more level of education and be able to read and understand English were included in the study. Young adults who run online businesses, bloggers and social media influencers, have any physical disability and any psychological illness were excluded from the study.

Measures

Consent Form and Demographic Information Sheet

Written consent was taken from the participants, time for completing the questionnaire and confidentiality was clearly mentioned in the consent form. Demographic information sheet was formed to find out participant's age, gender, education, birth order, status of participants, leisure time activities and purpose of using social media.

The Lifestyle Behavior Change Questionnaire

It was developed by Chopra et al. in 2021. It is a 5-point Likert scale from (1) significantly increased, (2) slightly increased, (3) grossly similar, (4) slightly decreased and (5) significantly decreased. Scale has 20 items and overall scale alpha coefficient is .72 which shows good internal consistency.

Coping Scale

It was developed by Hamby et al. 2013. It is a 13 items scale which consists of 2 subscales appraisal (items 1,2,3,4,5,6 and 7) and behavioral (items 8,9,10,11,12, and 13). The coefficient alpha of appraisal subscale is .89 and the coefficient alpha of behavioral subscale is .75. Scale is based on 1-4 responses Likert scale, where 1 is (not true), 2 (little true), 3(somewhat true), and 4(mostly true) with .90 coefficient alpha which shows good internal consistency.

Social Networking Usage Questionnaire

It was created by Savita and Liyaqat in 2018. A 5-point Likert scale from 5 (Always), 4(often), 3(sometimes), 2 (rarely) to 1(never). The scale comprised of total 19 items constructed on 4 subscales which were academic (items 3,9,12,13,14,17,18), socialization (items 1,2,6,7,8), entertainment (11,15,16,19) and informativeness (items 4,5,10). The scale had a .83 alpha coefficient which depicted good internal consistency.

Procedure

The reason for choosing this topic was to explore the impact of current circumstance of the COVID-19 smart lockdown. Scales were compiled into one questionnaire after the permission of authors. A demographic questionnaire comprised of personal data of the participant was used. A sample of N= 300 young adults was taken. The scales alongside the demographic data sheet were directed to every member of the sample. Written consent was taken from the members subsequent to clarifying the inspiration behind the study. Participants were briefed that the data will be kept confidential and might be utilized for research purposes. They were allowed to

leave the study assuming they need it with no bias and punishment. 10-15 minutes were taken to finish the surveys. The gathered information was entered into the SPSS, v 21 for computable investigation.

Results

Table 1

Psychometric Properties of the Scales and Subscales (N=300)

Scales	M	SD	Range	Cronbach's α
Health-related behaviors	51.86	10.84	20-100	.80
Coping strategies	34.94	7.59	13-37	.83
Appraisal	18.89	4.49	7-28	.77
Behavioural	16.05	3.88	6-24	.69
Social media usage	51.71	13.80	19-69	.83
Academic	20.81	6	7-35	.77
Socialization	13.32	4.4	5-25	.73
Entertainment	10.05	3.59	4-20	.71
Information	7.57	2.95	3-15	.69

Note. M= Mean; SD= Standard Deviation.

Table 1 showed the descriptive statistics and reliability coefficient of measures used in study i.e. health-related behaviors, coping strategies and social media usage. All the measure showed overall good reliability coefficient.

Table 2

Correlation between Demographic Characteristics, Health-Related Behaviors, Coping Strategies, and Social Media Usage in Young Adults (N=300)

Variables	*n*	*M*	*SD*	1	2	3	4	5	6
1.Age	300	23.66	3.77	-	.26**	.80**	.03	.03	.19**
2.Gender	300	1.50	.50	-	-	.19**	-.08	-.10	.11*
3.Edu	300	1.47	.77	-	-	-	.58**	.03	.20**
4.HRB	300	51.26	10.64	-	-	-	-	.16**	.20**
5.CS	300	34.94	7.59	-	-	-	-	-	-.19**
6.SMU	300	51.71	13.80	-	-	-	-	-	-

Note. Edu = Education; HRB = Health-Related Behavior; CS = Coping Strategies; SMU= Social Media Usage; $**p < 0.01$. $*p<0.05$

Table 2 indicated the results of correlation analysis that there was a significant positive relationship between demographic characteristics, health-related behaviors with social media usage and significant negative relationship between coping strategies and social media usage at 0.01 and 0.05 level of significance. The relationship showed that young adults who were concerned towards

their health-related behaviors used more social media to maintain a healthy life style by exploring things. Further, results showed that rather than spending so much time on social media, young adults gave preference in adapting different coping strategies to deal with the situation of COVID-19 smart lockdown.

Table 3

Mediation Analysis between Health- Related Behaviors and Social Media Usage through Coping Strategies (N=300)

		Consequent				
		CS (M)			SMU (Y)	
Antecedent		*β*	*SE*		*β*	*SE*
Constant		29.05***	3.85		50.91***	4.77
		.11***	.04	*c'*	.31***	.07
HRB (X)	*a*					
CS (M)		-	-	*b*	-.43***	.10
		$R^2 = .02$			$R^2 = .09$	
		$F(1,298) = 7.93, p< .000$			$F(2,297) = 15.69, p< .000$	

Note: β = standardized regression coefficient

The results of Table 3 indicated that the indirect effect of health-related behaviors on social media usage through coping strategies was significant, β = .01, 95% CI [-.09, -.01].

Therefore, coping strategies significantly mediated between health-related behaviors and social media usage in young adults (see Figure 1).
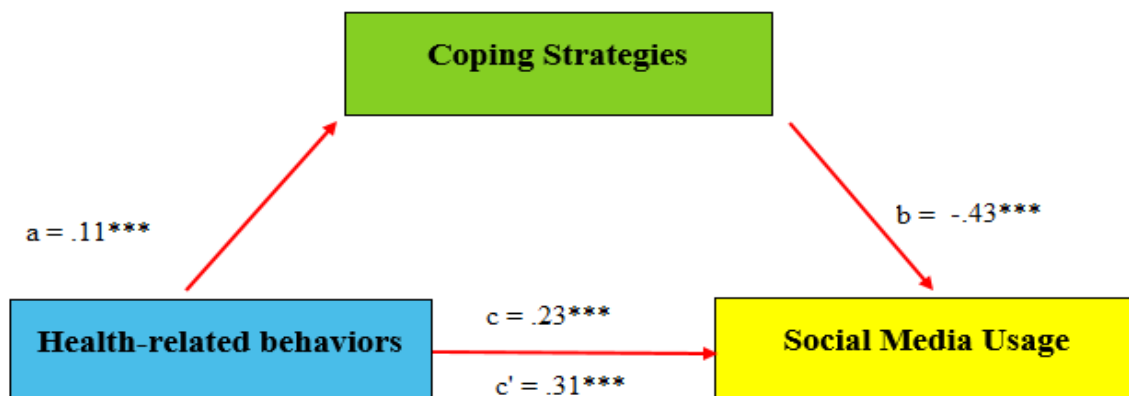
Figure 1

Coping Strategies as a Mediator

Table 4

Behavioral Coping Strategies used by Young Adults during COVID-19 Smart Lockdown (N=300)

Activities	f	%
Reading	90	30
Physical activities	84	28
Online activities	70	23.3
Others	30	10
None	15	5
Art and craft	11	3.7

Note. f = Frequency; % = Percentage

Table 4 indicated the results of descriptive statistics and it revealed the frequencies and percentages of behavioral coping strategies used by young adults during COVID-19 smart lockdown. Findings showed that young adults adapted different behavioral coping strategies during COVID-19 smart lockdown (See Figure 2).

Figure 2
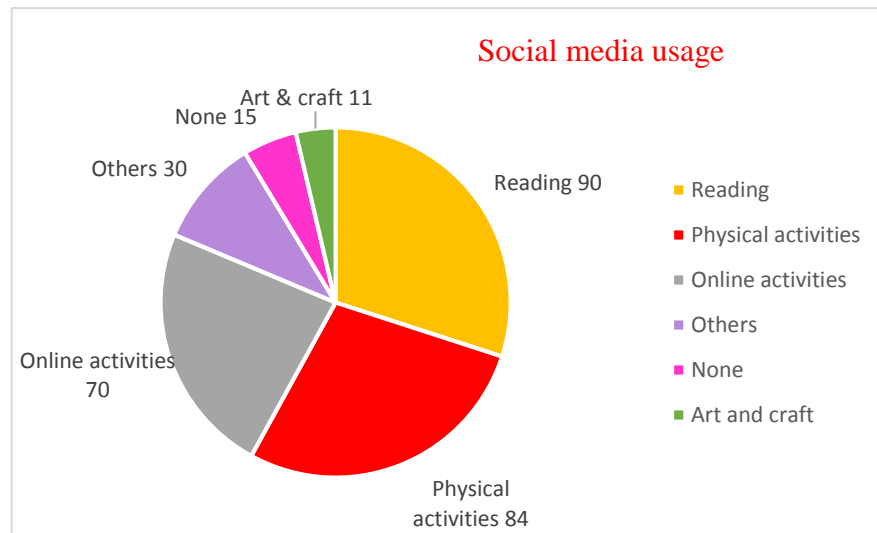
Behavioral Coping Strategies by Young Adults

Table 5

Independent Sample t-test Comparing Status of Young Adults in terms of Social Media Usage (N=300)

Variable	Professionals (n=109)		Non-professionals (n=191)				95% CI		
	M	*SD*	*M*	*SD*	*t(62.1)*	*p*	*LL*	*UL*	*Cohen's d*
SMU	58.02	13.66	51.36	13.13	3.1	.56	-12.27	-2.80	0.49

Note. CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit; SMU =Social Media Usage

Table 5 indicated the results of independent sample t-test and revealed non-significant status differences in terms of social media usage. No significant differences were found between professionals and non-professionals young adults in terms of social media usage during COVID-19 smart lockdown.

Table 6

One Way ANOVA Comparing Birth Order of Young Adults with Social Media Usage (N=300)

Variable	OC (n=14)		FB (n=68)		MB (n=152)		LB (n=66)		F (3,296)	p	Partial η^2
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*			
SMU	49.35	16.56	57.60	15.25	50.03	12.63	50.00	12.82	5.58	.001	.05

Note. M=Mean; SD= Standard Deviation; OC= Only Child; FB= First Born; MB= Middle Born; LB= Last Born

Table 6 showed results of One way ANOVA and it indicated that birth order of young adults during COVID-19 smart lockdown varies among four groups F (3, 296) = 5.58, $p < .05$, $\eta^2 = 0.52$. Similarly, variability in the scores of birth order was accounted with the medium effect size.

Table 6.1
Post Hoc Test of Young Adults in Terms of Birth Order and Social Media Usage (N=300)

I	J	MD	SE	p	LB	UB
Only child	First born	-8.24	3.96	.208	-18.73	2.24
	Middle born	-.68	3.77	1.00	-10.66	
	Last born	-.64	3.97	1.00		9.30
					-11.16	
						9.87
First born	Middle born	7.56	1.96	.001	2.34	12.77
	Last born	7.60	2.33	0.07	1.42	
						13.78
Middle born	Last born	.03	1.99	1.00	-5.23	5.30

Note. MD = Mean Difference; SE = Standard Error; CI = Confidence Interval; LB = Lower Bound; UB = Upper Bound

Table 6.1 indicated the results of multiple comparisons post hoc test Hochberg's GT2. The results of the multiple comparisons showed that first born and middle born had significant differences. No significant differences were indicated in other groups. Conclusively, first born and middle born showed more differences as compared to the other groups.

Discussion
The main objectives of the study were to examine the relationship between health-related behaviors, coping strategies and social media usage and whether coping strategies mediates the relationship between health-related behaviors and social media usage in young adults during COVID-19 smart lockdown. Findings of the recent exploration supported the hypotheses.
First hypothesis was that there was likely to be a significant relationship between health-related behaviors, coping strategies and social media usage in young adults during COVID-19 smart lockdown. Results of correlation analysis showed that there was a significant positive relationship between demographics characteristics, health-related behaviors with social media usage and significant negative relationship between coping strategies and social media usage. Young adults who were concerned towards their health-related behaviors used more social media to maintain a healthy life style by exploring things (Goodyear et al., 2019).

Further, results showed that rather than spending so much time on social media, young adults gave preference in adapting different behavioral coping strategies to deal with the stressful time of COVID-19 smart lockdown (Mathias et al., 2020). People used social media for getting information related to COVID-19 and health-related issues (Gecer et al., 2020). With regards to demographics, age, gender, education showed significant relationship with social media usage. Young adults were the ones who started using more social media and accepted most of the sites during COVID-19 smart lockdown (Mahmood et al., 2020). They shared healthy diet or exercise plans with others, taking healthy diet and controlled themselves from taking unhealthy food. Smokers quit smoking as well, as it was injurious to health and corona virus and smoking both left bad effect on lungs (Tarqi et al., 2020). Result of the first hypothesis is supported by prior researches.
Second hypothesis was that coping strategies mediates the relationship between health-

related behaviors and social media usage in young adults during COVID-19 smart lockdown. Result of the second hypothesis showed that coping strategies significantly mediated between health-related behaviors and social media usage in young adults. They improved their dietary patterns in a healthy manner and focused on their health-related behaviors by frequent use of social media during COVID-19 smart lockdown (Chopra et al., 2021). They used different social media sites as a tool for coping to deal in a better way with stressful events. There came a time when they became bored as well from using social media. It was the time when many of them engaged themselves into different activities, such as, reading, physical activities, cooking, gardening, and painting (Pahayahay & Khalili-Mahani, 2020). Young adults who used social media to cope with feelings of isolation and nervousness during COVID-19 smart lockdown adapt diverse coping strategies for passing their time (Cauberghe et al., 2021). Results of the previous researches supported the result of current study.

Third hypothesis of the study was that there was likely to be a significant difference in status of participants and social media usage during COVID-19 smart lockdown. The research presented new empirical findings regarding social media usage by professionals and non-professionals young adults during COVID-19 smart lockdown. No significant differences between professionals and non-professionals were revealed from the findings of the current research. During COVID-19 smart lockdown, things switched to virtual world. Workplaces adopted long-term work-from-home policies for their employees (Feng & Savani, 2020). Professionals begun home working (Veluchamy et al., 2021). Likewise, non-professionals additionally needed to remain at home, they utilized it for various purposes (Vyas & Butakhieo, 2021).Results

of the previous research were constant with the results of current research.

Fourth hypothesis of the study was that there was likely to be a significant difference in birth order status of participants and social media usage during COVID-19 smart lockdown. Result of the fourth hypothesis revealed that first born and middle born had significant differences. No significant differences were indicated in other group i.e. only child and last born. Result of the fourth hypothesis is supported by the earlier researches conducting on birth order. First born wanted to be with others to stay healthy and feel better, so they used more social media. Further, first-born used a wider variety of different sources of information (e.g., websites, mass media, social media). On the other hand, it was observed that middle born used first born and their parents as a model with whom to identify. By observing their older siblings, middle born tend to develop greater reliance. Just like first born, they spent time on social media in maintaining relationships with others during COVID-19 smart lockdown (Fukuya et al., 2021).

Conclusion

COVID-19 which was declared as the global health crisis helped increase the use of social media during smart lockdown. There were no such easy ways to kept busy, socially and emotionally healthy from distress when pandemic was attacking the humans. In short, from the past year, people's life style was totally changed, especially changes related to their health behaviors, physical exercise, disturbance in sleep, inadequate diet or eating habits and alcohol intake. These health-related behaviours can be seen in optimistic and adverse manners (Legnani et al., 2020). For dealing with the stressful time of the life during COVID-19 smart lockdown, people adapt different coping strategies, their thoughts and behaviors helped them a lot to deal with it (Stephenson & De Longis, 2020).

Social media is recognized as a source of strengthening relations. During the COVID-19 smart lockdown, that time social media became a necessity, people spent time with others through social media and cope best during their stressful time. Foremost benefit of social media was that it spreads consciousness and give social facility to the people who were quarantined and faced difficulties in meeting with people during smart lockdown (Singh et al., 2020).

Suggestions

For further studies here are the following suggestions. Sample size can be stretched out to make the substantial generalizability. For more thorough outcomes, we can take general population for additional investigations.

Implications

The current review provided knowledge in interfacing with others, wellbeing-related practices, and adapting coping techniques

through social media of some sort, which was significant during COVID- 19 smart lockdown. One unique effect is taking part in practices around good dieting and practice and distinctive positive exercises to keep us occupied while utilizing diverse web-based media destinations. Findings had coherent consequences for the advancement of assorted techniques for different populations like teenagers, instructors, guardians, specialists, and so on expecting to more readily deal with their ways of life during unpleasant or awful mishaps.

Conflict of Interest

There is no conflict of interest declared by authors.

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