

# An empirical study on impact of poor physical health on self management and Social skills of female sex workers in Mumbai City

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**Abstract** - Mental Health is as important as physical health for a decent living. Sex workers are known to have more mental health issues than the rest of the population and are known to be leading an abused life. They are known to lacking self-management and social skills, which are very essential to have a healthy living. Lack of these factors may impact their emotional state very easily. Current study focuses on determining the level of self-management and social skills present in sex workers in Mumbai City. These are found to be on the lower side in among the select samples.

**keywords** - Key words: Sex worker, Mental Health, emotional state, self-management, social-skills

## Introduction

Self-Management and Social skills are two of the vital factors for leading an emotionally (decently) healthy life.

1. Self-management includes the ability of a person to redirect and control disruptive impulses and moods, judging how others might feel before taking action, and postponing gratification of immediate needs for long-term goals.
2. Social skills refer to a person's proficiency in managing relationships and building networks. It is reflected in building and leading teams.

Psychological distress is higher in women working in sex industry. The various psycho social issues are associated with female commercial sex workers (FCSWs). The host of psychosocial vulnerabilities including, childhood sexual abuse, exposure to childhood physical abuse, poverty, interpersonal violence in adulthood, sexually transmitted diseases, and substance use, forms a fertile ground for psychiatric morbidity. They lead a life with a lot of unhealed emotions. These vulnerabilities weaken them emotionally, as a result they result in having poor self- management and social skills.

## Review of Literature

Self Management (SM) has been a topic of increasing interest in women literature (e.g., Luthans & Davis, 1979; Manz & Sims, 1980; Mills, 1983). However, much of the conceptual and empirical literature has focused on the relationship between external control mechanism and abused women leading their lives (Blau & Schoenherr, 1975; Caplow, 1957; Ouchi, 1977; Reves & Woodward, 1970; Performing well in self-leadership will increase the chances in succeeding in self-management processes. Internal regulation is a very effective approach for management, as well as internal peace are very effective for women to be committed to themselves and self motivated (Pihl-Thingvad, 2014) these strategies have been found to increase their quality of living/job satisfaction and therefore their peace of mind and physical health (Marques-Quinteiro & Curral, 2012; Ross, 2014).

Phillips (1978) defined social skills as the interaction between a person and his/her environment and the ability to begin and sustain interpersonal relationships.

Gresham and Elliott (1984) defined social skills as socially acceptable learned behaviors that enable a person to interact with others in ways that elicit positive responses and assist in avoiding negative responses. These definitions of social skills highlight the dimension of cultural specificity. What kind of social behaviours are considered as appropriate and desirable is determined by the cultural believes of the community involved. Communicating and interacting can also be considered as skillful art in which people carefully using their social skills to reach their goal or fulfill their purpose sooner. Social skills aid individuals in creating healthy and positive interactions. Children learn these skills through the process of socialization. Interpersonal skills that help them to relate with others can be dominance vs. submission, love vs. hate, affiliation vs. aggression, and control vs. autonomy categories (Leary, 1957).

## Research Methodology

The main objective of the present investigation was to assess the extent of Self-management and social skills present among sex workers in an urban set up.

Primary sources of Data

## Locale of the study

The present study is based on primary data collected from women sex workers in Mumbai Kamtipura area by administering an interview schedule and personally interviewing them. 100 such schedules were administered to them using purposive

sampling technique. An enumerator was appointed for the purpose. Based on the relevance of the responses, it was trimmed to 82.

#### **Period of the study**

October 2019- January 2020

#### **Sample selection**

The sample consisted of 82 women sex workers aged between 18 and 55 years of age.

#### **Secondary Sources**

M.Phil/ PhD Thesis, Journals and other periodicals.

#### **Questions asked were**

Along with questions on certain personal details and physical health issues, questions (listed below) pertaining to self management and social skills of these were also asked...

#### **Self-management**

- Circumstances are beyond my control.
- I accept myself, even when I know that I'm not perfect.
- I avoid confrontations (frank unpleasant discussions)
- I experience eating problems (overeating, loss of appetite, no time to eat)
- I find it difficult to bounce back after feeling disappointed.
- I find it difficult to work under pressure.
- I know how to say no when I have to
- I remain calm, even in situations when others get angry.

#### **Social Skills**

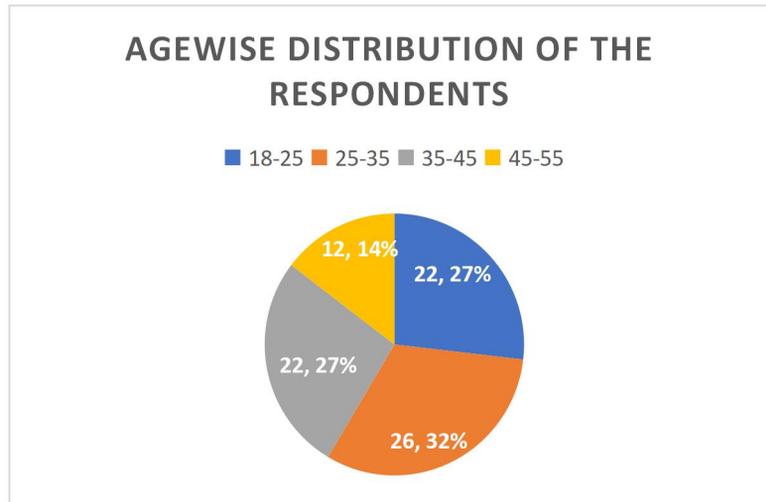
- I find it easy to establish contact with important persons.
- I get angry when I am criticised by my friends.
- Learning is fun for me (I enjoy learning new things).
- I can socialise well.
- I do not hesitate in expressing my disagreement.
- I have several friends I can count on, as and when I need them
- I'm jealous of friends who achieve more than I do.
- People like me.

#### **Objectives of the study**

1. To determine age wise level of self-management and social skills among the selected sample
2. To examine if the three above-mentioned factors have a significant relationship with the traumatic experiences, if any of the respondents.
3. To assess if the daily income of the respondents have a significant association with the self-management and social skills of the respondents.

#### **Results and Discussion**

1. Socio-economic profile of the respondents
  - Age-wise distribution of the respondents
  - Figure 1 Age-wise distribution of the respondents



Source: Analysis based on samples interviewed

Figure 1 above shows the age distribution of the respondents. Majority of the respondents (32 % belonged to the age group between 25 and 35 years of age, while, only 14 per cent of them belonged to the age group of 45-55.

H0: There is no significant relationship between age of the respondents and their taking up the current job

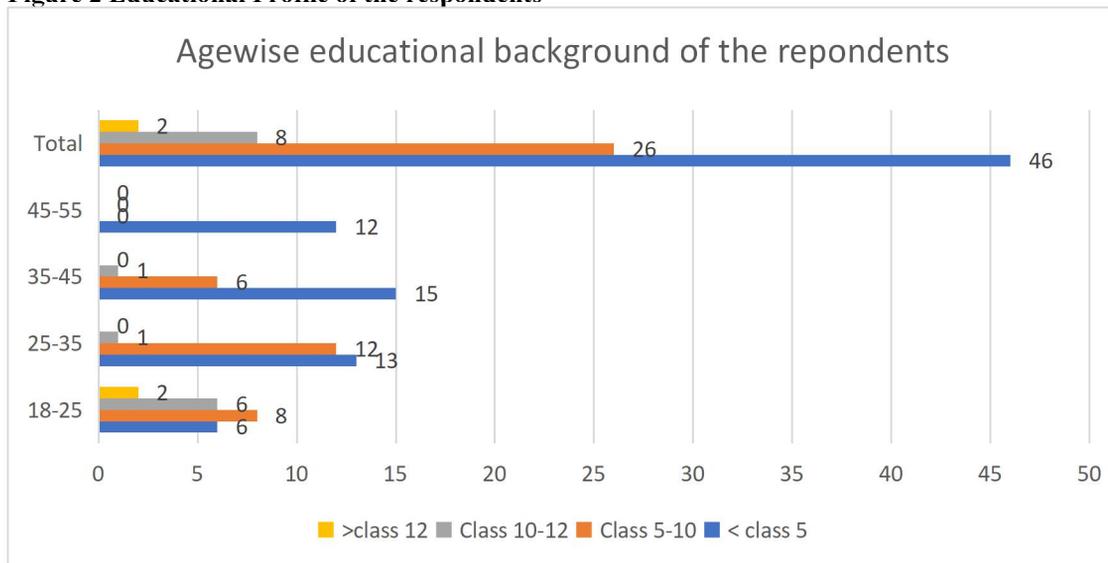
**Table 1 Chi-Squared Test Results**

Value	1.243
Df	3
Sig.	0.943

From table 1, showing results of chi-squared test conducted 5% significant level the researchers are unable to accept the null hypothesis and conclude that there is a significant association between age of the respondents and their taking up the current job.

**2. Educational background of the respondents**

**Figure 2 Educational Profile of the respondents**



Source:

Analysis based on samples interviewed

The above figure 2, depicts the educational level of the respondents. Majority of the older women have not even completed their primary schooling which leave them with minimum level of education, while, only a few of them have completed their class 12.

H0: There is no significant relationship between the level of education of the respondents and their taking up the current job

**Table 2 Chi-Squared Test Results**

Value	0.243
Df	3
Sig.	0.943

Source: Analysis based on samples interviewed

From table 2, showing results of chi-squared test conducted 5% significant level the researchers are unable to reject the null hypothesis and conclude that there is a significant association between the education level of the respondents and their taking up the current job.

**Table 3 Average Daily income of the respondents**

Age/ Daily Income	Average Rs 0-200	Rs 200- 400	Rs 400- 600	Rs 600- 800	Rs 800- 1000	>Rs 1000	Total
Number of Respondents							
18-25	6	8	4	2	2	0	22
25-35	9	6	4	3	3	1	26
35-45	4	8	3	4	2	1	22
45-55	5	0	1	3	3	0	12
Total	24	22	12	12	10	2	82

Source: Analysis based on samples interviewed

Table 3 above shows the daily earnings of the respondents, irrespective of the hours of work they put in on a daily basis (ranging from 2hours to 16 hours). Only a few of them earn over Rs 1000 on an average per day, while majority of them earn only a maximum of Rs 600 per day, on an average.

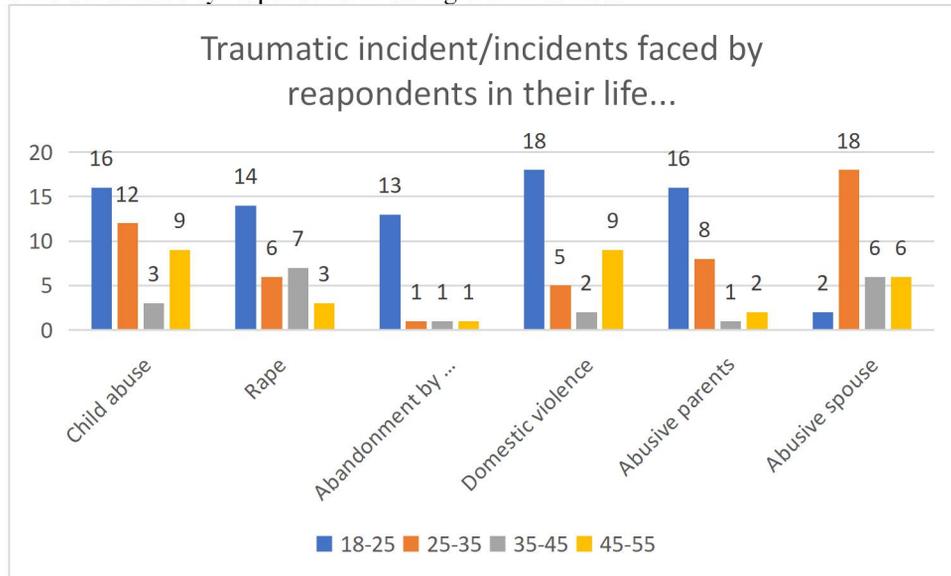
HO: There is no significant association between daily wages and their hours of work

**Table 4 Chi-Squared Test Results**

Value	329.75
Degrees of Freedom	133
P-Value	0.00

From table 4, at 5% significance level, we unable to accept the null hypothesis and conclude that there is significant association between the daily wages and hours of work put in by the respondent to earn those wages.

Figure 3 Traumatic incidents faced by respondents in during their lifetime...



Source: Analysis based on samples interviewed

Ho: There is no significant association between traumatic life incidents and their reason for taking up the current profession

**Table 5 Chi-Squared Test Results**

Value	0.243
Df	7
Sig.	0.943

Source: Analysis based on samples interviewed

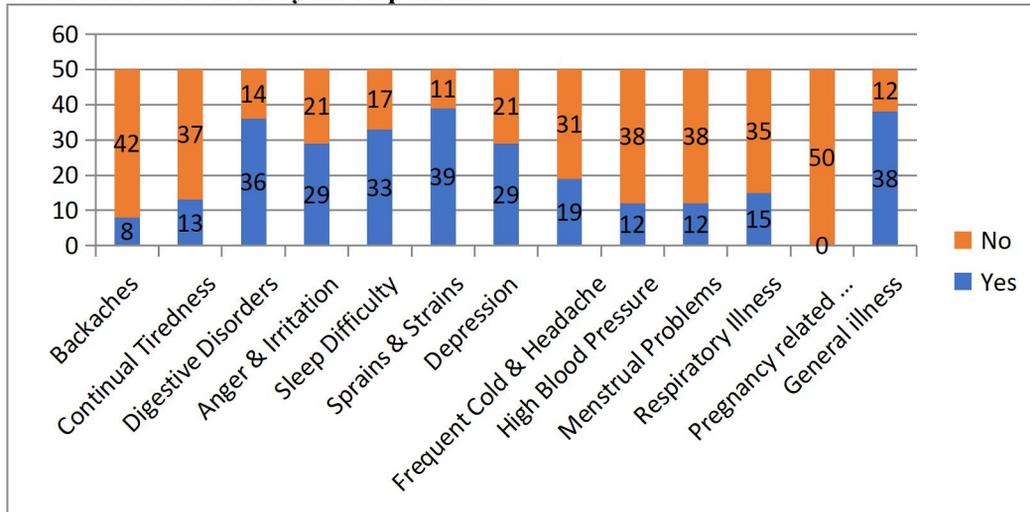
From table 4, at 5% significance level, we accept the null hypothesis and conclude that there is significant association between the traumatic life incidents of the respondents and the reason for them taking up current profession.

**Physical Health issues faced by the respondents**

**Impact of late night and excess work on women:**

Women working in late and excessively, do not get proper sleep as majority of them have to devote the day towards domestic chores. Lack of proper sleep during daytime creates many problems for women for performing their social obligations up to the expectations of family and society. For married women, with children or other dependents, it is not possible to sleep during daytime. The naps during day cannot make up for a night’s sleep. Because of the time differences, the natural order of things is reversed and plays havoc with mind. Women are unable to spend time on them or with their near and dear ones and are thus completely cut-off from spending even a few minutes of quality time for themselves. This has resulted to their Anger & Irritation which has followed by Backaches, Continual Tiredness, Sprains & Strains of major Depression and Digestive Disorders and .Frequent Cold & Headache. This will result in physical health. The major health problems faced by the women employees were high blood pressure accompanied by sleep disorders. The other health problems faced were menstrual related problems, respiratory illness and digestive problems. Women tend to feel lethargic and lifeless during the day. Studies on the physical, psychological and medical effects of night work comes on a consensus that if night shift Physical effect on the health of women

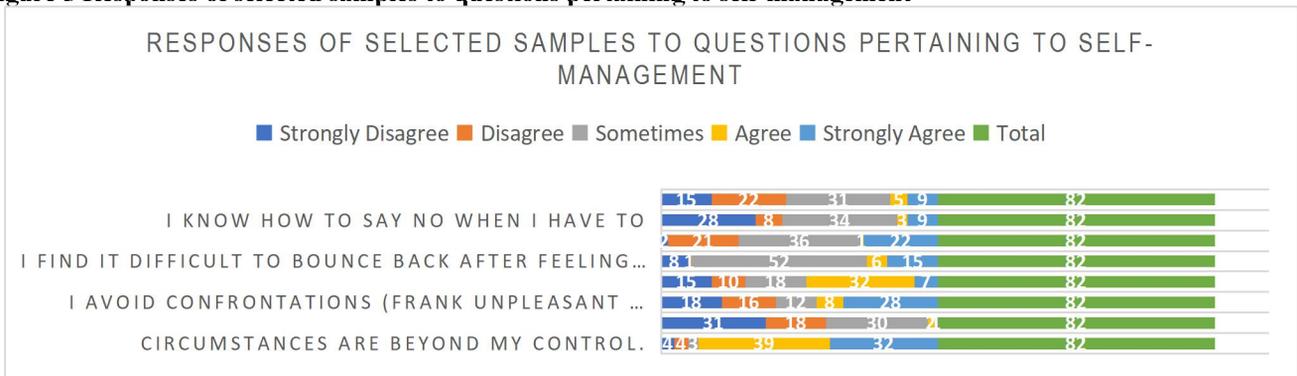
**Figure 4 Physical Health issues faced by the respondents**



Source: Analysis based on samples interviewed

The above figure depicts the physical problems associated with night shifts on women’s health. Majority of the respondents suffer from digestive disorders (72 percent), sleep difficulty (66 percent) and strains and sprains (78 percent). These, have in turn, resulted in anger and irritability among 58 percent of the respondents which has also led to problems like depression among them.

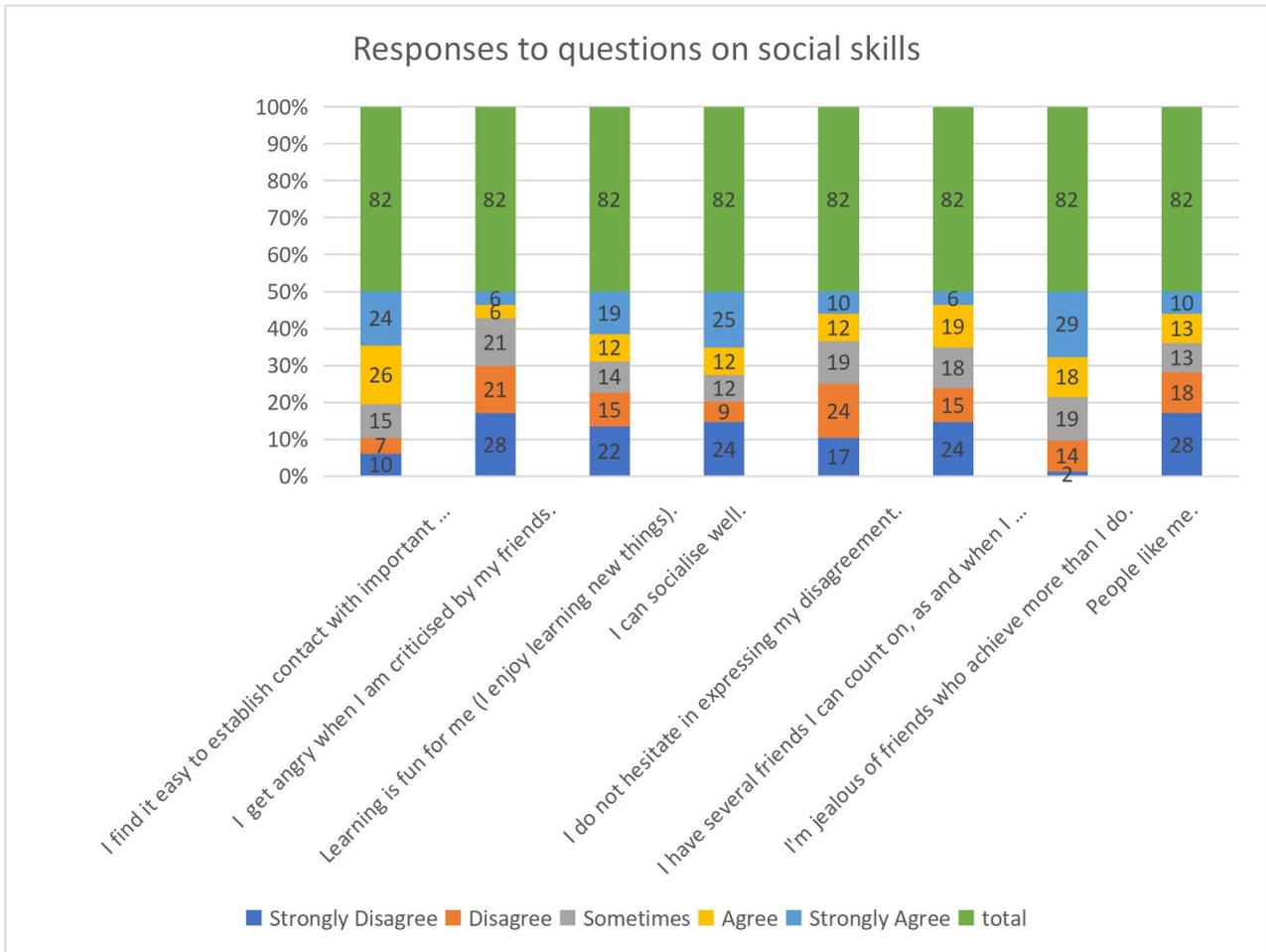
**Figure 5 Responses of selected samples to questions pertaining to self-management**



Source: Analysis based on samples interviewed

The above graph shows the responses indicated by the select samples to questions of self management. Of the total 82 respondents interviewed, Majority of the opinion that they find it difficult to work under pressure, avoid confrontations, and feel that at times, circumstances get beyond their control. While they are not able to say no when they have to or accept themselves when they are wrong. These show traits of poor self management among the respondents.

**Figure 6 Responses of selected samples to questions pertaining to social skills**



Source: Analysis based on samples interviewed

Figure 6 shows the respondents view on questions related to social skills. Most of the respondents depicted traits poor social skills, on responding negatively or neutrally to positive questions like “people like me”, Jealous of friends who achieve more than the respondents and responding negatively and being neutral to questions like “Learning if fun”, “ I Can socialize well. Unless they possess social skills, they will not be able to get their stress out.

**PLS-SEM Model Assessment**

One of the challenges in survey research is the selection of an appropriate statistical model for analysis. Partial Least Squares based Structural Equation Modeling (PLS-SEM and Covariance-Based Structural Equation Modeling (CB-SEM) modeling are two well-known multivariate data analysis methods for researchers and scholars (e.g.; Götz, Liehr-Gobbers, & Krafft, 2010; Lowry & Gaskin, 2014).

CB-SEM is based on the concept of factor analysis, which is suitable for theory testing. It uses maximum likelihood estimation, whereas PLS-SEM is based on the principal component concept (which is suitable for theory building) and uses the partial least squares estimator (Hair, Ringle, & Sarsted, 2011; Lowry & Gaskin, 2014; Vinzi, Chin, Henseler, & Wang, 2010). The study opted for PLS-SEM for the following reasons: 1) It is suitable for theory building studies (Vinzi et al., 2010; Sarsted, 2008). 2). It is considered appropriate for examining complex cause-effect-relationship models (Henseler, Ringle, & Sinkovics, 2009; Lowry & Gaskin, 2014). 3) It is a non-parametric approach, and it poses fewer restrictions especially on data distribution and sample size (Vinzi et al., 2010).

The study used the PLS-SEM approach and assessed the measurement model (also referred to as the outer model) and structural model (also referred to as the inner model). Figure provides more details of our approach.

**Measurement Model Assessment**

In PLS-SEM, assessment of the measurement model (also referred to as the outer model) includes composite reliability (CR) to evaluate internal consistency, individual indicator reliability and average variance extracted (AVE) to evaluate convergent validity (Hair, Hult, Ringle, & Sarstedt, 2013).

**Internal Consistency Reliability**

This is a form of reliability that is used to access the consistency of results across items of the same variables (Hair et al., 2013). It determines whether the items measuring a variable are similar in their scores (Hair, Tatham, Anderson, & Black, 2006). Internal consistency reliability is accessed by using CR. Table 4.1.1 shows the CR values of all the latent variables used in this study. These values were found to be > 0.70 (Hair et al., 2006) which establishes internal consistency.

**Convergent Validity**

This refers to the extent to which a measure correlates positively with alternative measures of the same variable (Hair et al., 2013). AVE was calculated to assess convergent validity. Table 4.4.1 shows the AVE values of all the latent variables used in this study. These values were found to be more than the prescribed value of 0.50 (Hair et al., 2006) and therefore establish convergent validity.

**Discriminant Validity**

This is the extent to which a variable is truly distinct from other variables, in terms of how much it correlates with other variables, and how much indicators represent only a single variable (Hair et al., 2013). The criterion and cross-loading scores of Fornell & Larcker (1981) were used to establish discriminant validity. Table demonstrates that the square root of AVE for all latent variables was higher than the inter-construct correlations (Fornell & Larcker, 1981) and therefore they confirm discriminant validity. Further, all indicators’ individual loadings were found to be higher than their respective cross-loadings (Hair et al., 2013).

**Table6-Construct Validity and Discriminant Validity**

	AVE	CR	Abuses	Physical Health Issues	Self Management	Social Skills
Abuses	0.56	0.81	0.58			
Physical Health Issues	0.58	0.74	-0.47	0.67		
Self Management	0.98	0.96	0.37	0.37	0.87	
Social Skills	0.54	0.88	0.31	0.32	0.47	0.69

Sources: Data based on Field Survey, 2019.

Notes: AVE: Average Variance Extracted; CR: Composite Reliability

The off-diagonal values are the correlations between latent variables and the diagonal are the square root of AVE.

**Indicator Reliability**

This represents how much of the variation in an item is explained by a variable (Hair et al., 2013). Indicator reliability was assessed using the outer loadings. A higher outer loading on a variable indicates that the associated measure has much in common, that is measured by the variable (Hair et al., 2013). Hair, Hult, Ringle, & Sarstedt (2013) suggested that items having a loading >0.70 should be retained, items having an outer loading value >0.40 should be omitted and that its impact on the AVE and CR of the variable should be analysed. If the AVE and CR of the variable reach above the threshold value, then the given item should be omitted; otherwise, it should be retained. Omitting these items resulted in an increase in CR and AVE above the suggested threshold values of 0.70 and 0.50, respectively (Hair et al., 2013).

**Structural Model Assessment**

After establishing the reliability and validity of the latent variables in the measurement model, the study assess the structural model (also referred to as the inner model) to test the relationship between endogenous and exogenous variables. In PLS-SEM, structural model assessment includes path coefficients to evaluate the significance and relevance of structural model relationships, R<sup>2</sup> value to evaluate the model’s predictive accuracy, Q<sup>2</sup> to evaluate the model’s predictive relevance and f<sup>2</sup> to evaluate the substantial impact of the exogenous variable on an endogenous variable (Hair et al., 2013).

**Summary, Conclusion and Recommendations**

Findings of the analysis can be summarized as

1. There is a significant association between age of the respondents and their taking up the current job.
2. There is a significant association between the education level of the respondents and their taking up the current job.
3. There is significant association between the daily wages and hours of work put in by the respondent to earn those wages.
4. There is significant association between the daily wages and hours of work put in by the respondent to earn those wages.
5. There is significant association between the traumatic life incidents of the respondents and the reason for them taking up current profession.

Respondents interviewed have undergone one or more traumatic instances in life and work beyond their physical capacity. Both mental physical torments have put them under tremendous stress, which has weakened their self-management and social skills. These are absolutely necessary for an individual to lead a quality/ decent/ peaceful life.

**Recommendations**

NGOs can help these women by organizing counselling camps for them and help them in realizing the importance of physical and mental well-being.

**References**

[1] Ahmed R, Seedat M, van Niekerk A, Bulbulia S. Discerning community resilience in disadvantaged communities in the context of violence and injury prevention. *South African Journal of Psychology*. 2004;34(3):386–408.  
 [2] Ambler M. Putting a name to Cultural resilience. *Tribal College Journal*. 2003;14(4):8–9.

- [3] Andersson N, Ledogar RJ. The CIET Aboriginal youth resilience studies: 14 years of capacity building and methods development in Canada. *Pimatisiwin: Journal of Aboriginal and Indigenous Community Health*. 2008;6(2):65–88.
- [4] Anthony EJ. The syndrome of the psychologically invulnerable child. In: Anthony EJ, Koupernik C, editors. *The Child in His Family: Children at Psychiatric Risk*. New York: Wiley; 1974. pp. 529–545.
- [5] Brave Heart MYH. The return to the sacred path: Healing the historical trauma and historical unresolved grief response among the Lakota through a psycho-educational group intervention. *Smith College Studies in Social Work*. 1998;68(3):287–305.
- [6] Brave Heart MYH. The historical trauma response among Natives and its relationship with substance abuse: A Lakota illustration. *Journal of Psychoactive Drugs*. 2003;35(1):7–13.
- [7] Brave Heart MYH, DeBruyn LM. The Native American holocaust: Healing historical unresolved grief. *Native American and Alaska Native Mental Health Research*. 1998;8(2):56–78.
- [8] Burack J, Blidner A, Flores H, Fitch T. Constructions and deconstructions of risk, resilience and wellbeing: A model for understanding the development of Aboriginal adolescents. *Australasian Psychiatry*. 2007;15(Supplement 1):S18–23.
- [9] Chandler MJ, Lalonde C. Cultural continuity as a hedge against suicide in Canada's First Nations. *Transcultural Psychiatry*. 1998;35:191–219.
- [10] Duran E, Duran B. *Native American Post-Colonial Psychology*. New York: State University of New York Press; 1995.
- [11] Fergus S, Zimmerman M. Adolescent resilience: A Framework for understanding health development in the face of risk. *Annual Review of Public Health*. 2005;26:399–419.
- [12] Fleming J, Ledogar RJ. Resilience, an Evolving Concept: A Review of Literature Relevant to Aboriginal Research. *Pimatisiwin: Journal of Aboriginal and Indigenous Community Health*. 2008;6(2):7–23.
- [13] Fonagy P, Steele M, Steele H, Higgitt A, Target M. The Emmanuel Miller Memorial Lecture 1992 — The theory and practice of resilience. *Journal of Child Psychology and Psychiatry*. 1994;35(2):231–257.
- [14] Garnezy N, Masten AS, Tellegen A. The study of stress and competence in children: A building block for developmental psychopathology. *Child Development*. 1984;55:97–111.
- [15] Hair, J., Black, W., Babin, B., Anderson, R. and Tatham, R. (2006) *Multivariate Data Analysis*. 6th Edition, Pearson Prentice Hall, Upper Saddle River.
- [16] Hallett D, Chandler MJ, Lalonde CE. Aboriginal language knowledge and youth suicide. *Cognitive Development*. 2007;22:392–399.
- [17] Healy S. Cultural resilience, identity and the restructuring of political power in Bolivia. Paper Submitted for the 11th Biennial Conference of the International Association for the Study of Common Property; Bali, Indonesia. June 19 – June 23, 2006; 2006.
- [18] HeavyRunner I, Morris JS. Traditional Native culture and resilience. 1997.
- [19] HeavyRunner I, Marshall K. "Miracle survivors": Promoting resilience in Indian students. *Tribal College Journal*. 2003;14(4):14–19.
- [20] Hunter A. Adolescent resilience. *Image: Journal of Nursing Scholarship*. 1999;31(3):243–247.
- [21] Jayachitra T.A, Nandini Jagannarayan(2020), Social and Emotional Health survey among Voluntary and Involuntary Singlehood women in select suburbs of Mumbai city, *Studies in Indian Place Names* 40 (53), 235-240, 2020
- [22] Jayachitra T.A, Nandini Jagannarayan(2020), Jayachitra T.A, Nandini Jagannarayan(2020), An Empirical Study on Customer's extensive usage of net banking Facility in Gobichettipalayam, Erode District, *Studies in Indian Place Names, Vol40-Issue 36-February 2020*, 11-18
- [23] Jayachitra T.A, Nandini Jagannarayan(2020), An Empirical Study on Student's Learning Through e -Learning Modules Offered by Corporate Through Colleges in Mumbai , *THINK INDIA JOURNAL, Vol-22-Issue-33-December-2019*
- [24] Jayachitra T.A, Nandini Jagannarayan(2020),A Study on Transformation of Indian Culture: Women in Night Shift Work, Consequences on Physical and Mental Health– With Special Reference of Private Hospitals in Mumbai City *Indian Place Names, TPNS India Vol 40. Issue 31, Page nos 75-81, ISSN 2394-3114, Vol 40. Issue 35, February 2020*
- [25] Jayachitra T.A, Nandini Jagannarayan(2020) "QUALITY OF WORK LIFE OF WOMEN EMPLOYEES IN BANKING INDUSTRY with special reference to employees of selected private sector banks in Gobichettipalayam district, Tamilnadu" *Studies in Indian Place Names (UGC CARE Journal) ISSN 2394-3114 with Impact Factor 6.2 in March 2020 Issue.*
- [26] Jayachitra T.A, Nandini Jagannarayan(2020) "Women enrolment in Higher education-- parents' perspective of safety aspect as a determinant of enrolling their daughter in colleges for higher education in rural Coimbatore district, Tamilnadu", *Studies in Indian Place Names (UGC CARE Journal) ISSN 2394-3114 with Impact Factor 6.2 in March 2020 Issue.*
- [27] LaFromboise TD, Hoyt DR, Oliver L, Whitbeck LB. Family, community, and school influences on resilience among American Indian adolescents in the upper midwest. *Journal of Community Psychology*. 2006;34(2):193–209.
- [28] Lalonde C. Identity formation and cultural resilience in Aboriginal communities. In: Flynn RJ, Dudding P, Barber J, editors. *Promoting Resilience in Child Welfare*. Ottawa: University of Ottawa Press; 2005. pp. 52–72.
- [29] Long CR, Nelson K. Honoring diversity: The reliability, utility and validity of a scale for measuring Native American resilience. *Journal of Human Behavior in the Social Environment*. 1999;2(1/2):91–107.
- [30] Luthar SS. Vulnerability and resilience: A study of high risk adolescents. *Child Development*. 1991;62:600–616.
- [31] Luthar SS. Resilience in development: A synthesis of research across five decades. In: Cicchetti D, Cohen DJ, editors. *Developmental Psychopathology: Risk, Disorder, and Adaptation*. New York: Wiley; 2006. pp. 740–795.
- [32] Luthar SS, Cicchetti D. The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*. 2000;71(3):543–562.

- [33] Masten AS. Ordinary magic: Resilience processes in development. *American Psychologist*. 2001;56(3):227–238.
- [34] Mills RC, Schuford R. Health realization: An innate resiliency paradigm for school psychology. *Hawaii International Conference On Education*; January 7–10, 2003; Honolulu, Hawaii, USA .2003.
- [35] Olsson C, Bond L, Burns JM, Vella-Broderick DA, Sawyer SM. Adolescent resilience: A concept analysis. *Journal of Adolescence*. 2003;26:1–11.
- [36] Oshio A, Kaneko H, Magamine S, Nakaya M. Construct validity of the Adolescent Resilience Scale. *Psychological Reports*. 2003;93:1217–1222.
- [37] Richardson GE. The metatheory of resilience and resiliency. *Journal of Clinical Psychology*. 2002;58(3):307–321.
- [38] Rutter M. Protective factors in children's responses to stress and disadvantage. In: Kent MW, Rolf JE, editors. *Primary Prevention of Psychopathology Volume III: Social Competence in Children*. Hanover, NH: University Press of New England; 1979. pp. 49–74.
- [39] Rutter M. Psychosocial resilience and protective mechanisms. In: Rolf J, Masten AS, Cicchetti D, Nüchterlein KH, Weintraub S, editors. *Risk and Protective Factors in the Development of Psychopathology*. New York: Cambridge University Press; 1990. pp. 181–214.
- [40] Rutter M. Resilience concepts and findings: Implications for family therapy. *Journal of Family Therapy*. 1999;21:119–144.
- [41] Rutter M. Resilience re-considered: Conceptual considerations, empirical findings, and policy implications. In: Shonkoff JP, Meisels SJ, editors. *Handbook of Early Childhood Intervention*. Vol. 2. New York: Cambridge University Press; 2000. pp. 651–682.
- [42] Rutter M. Environmentally mediated risks for psychopathology: Research strategies and findings. *Journal of the American Academy of Child and Adolescent Psychiatry*. 2005;44(1):3–18.
- [43] Sameroff AJ, Seifer R, Barocas R, Zax M, Greenspan S. Intelligence quotient scores of 4-year old children: Social-environmental risk factors. *Pediatrics*. 1987;79:343–350.
- [44] Sameroff AJ, Rosenblum KL. Psychosocial constraints on the development of resilience. *Annals of the New York Academy of Science*. 2006;1094:116–124.
- [45] Sandler I. Quality and ecology of adversity as common mechanisms of risk and resilience. *American Journal of Community Psychology*. 2001;29(1):19–61.
- [46] Sinclair VG, Wallston KA. The development and psychometric evaluation of the Brief Resilient Coping Scale. *Assessment*. 2004;11:94–101.
- [47] Solkoff N. Children of survivors of the Nazi holocaust: Critical review of the literature. *American Journal of Orthopsychiatry*. 1992;62(3):342–358.
- [48] Sonn CC, Fisher AT. Sense of community: Community resilient responses to oppression and change. *Journal of Community Psychology*. 1998;26(5):457–472.
- [49] Spicer P, Bezdek M, Manson SM, Beals J. A program of research on spirituality and American Indian alcohol use. *Southern Medical Journal*. 2007;100(4):430–432.
- [50] Sroufe LA, Egeland B, Carlson E, Collins A. *The Development of the Person: The Minnesota Study of Risk and Adaptation from Birth to Adulthood*. New York City: The Guilford Press; 2005.
- [51] Strand JA, Peacock R. Resource guide: Cultural resilience. *Tribal College Journal*. 2003;14(4):28–31.
- [52] Wagnild GM, Young HM. Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement*. 1993;1:165–178.
- [53] Werner E. Resilience in development. *Current Directions in Psychological Science*. 1995;4(3):81–85.
- [54] Werner EE, Smith RS. *Vulnerable but Invincible: A Longitudinal Study of Resilient Children and Youth*. New York: McGraw-Hill; 1982.
- [55] Werner EE, Smith RS. *Journeys from Childhood to Midlife: Risk, Resilience and Recovery*. Ithaca, NY: Cornell University Press; 2001.
- [56] Whitbeck LB, Adams GW, Hoyt DR, Chen X. Conceptualizing and measuring historical trauma among American Indian people. *American Journal of Community Psychology*. 2004a;33(3/4):119–130.
- [57] Whitbeck LB, Chen X, Hoyt DR, Adams Gary W. Discrimination, historical loss and enculturation: Culturally specific risk and resiliency factors for alcohol abuse among American Indians. *Journal of Studies on Alcohol*. 2004b;65:409–418.
- [58] World Health Organization (WHO) *The World Health Report 2001 — New Understanding, New Hope*. Geneva: World Health Organization; 2001.