

Life Satisfaction and Psychological Distress in Street-Market Workers: An Exploratory Study in Northern Chile

Satisfacción vital y estrés psicológico en trabajadores de ferias libres: Un estudio exploratorio en el norte de Chile

Mauricio Ramírez-Perez¹ <https://orcid.org/0000-0002-6465-8499>

Denise Vicentelo Mercado¹ <https://orcid.org/0000-0003-1023-5113>

Gina Sánchez Mendoza¹ <https://orcid.org/0000-0001-7507-4117>

1. Universidad de Tarapacá, Chile

**Autor correspondiente /
Correspondence:**

Mauricio Ramírez Perez
maramirezp@academicos.uta.cl

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The number of Chilean workers affected by psychological distress at work has been increasing during the last few years. Consequently, much research has been focused on explaining this phenomenon. Furthermore, the relationship with life satisfaction has been studied. However, the emergence of life satisfaction and psychological distress and its relationship among Chilean street-market workers have yet to be deeply studied. Notwithstanding, this group of workers is relevant to the local economy; they are informal workers with high levels of vulnerability. The primary purpose of this research is to determine the levels of life satisfaction and psychological distress and their relationship in a sample of street-market workers in Arica, north of Chile. An exploratory study with a cross-sectional design explored the relationship between the variables of interest in a sample of 189 street-market workers. The research results showed that these workers' life satisfaction and psychological distress are worse than other kinds of workers reported in previous research. This sample has a negative relationship between life satisfaction and psychological distress. Furthermore, differences were identified between female and male street-market workers. These results are promising to develop future research and effectively help street-market workers face psychological distress.

Keywords: street-market workers, life satisfaction, psychological distress, informal workers

El número de trabajadores chilenos afectados por estrés psicológico producido por el trabajo se ha incrementado durante los últimos años. En consecuencia, un número considerable de investigaciones se han enfocado en este fenómeno. Además, su relación con la satisfacción con la vida ha sido estudiada. Sin embargo, el surgimiento de estrés psicológico y satisfacción con la vida y la relación que establecen en trabajadores en trabajadores de ferias libres no ha sido estudiado profundamente en Chile. A pesar de que este grupo de trabajadores son relevantes para la economía local, ellos son trabajadores informales con altos niveles de vulnerabilidad. El principal objetivo de esta investigación es establecer los niveles de satisfacción con la vida y estrés psicológico y su relación, en una muestra de trabajadores de ferias libres de la ciudad de Arica, en el norte de Chile. Mediante un estudio exploratorio con un diseño transversal fueron estudiadas las variables de interés en una muestra de 189 trabajadores de ferias libres. Los resultados de esta investigación demostraron que los niveles de satisfacción con la vida y estrés psicológico de estos trabajadores son peores que de otros tipos de trabajadores reportados en investigaciones previas. Se evidencia una relación negativa entre satisfacción con la vida y estrés psicológico. Además, existen diferencias entre trabajadoras y trabajadores de ferias libres en los niveles de estrés psicológico reportados. Estos resultados son prometedores para desarrollar futuras investigaciones y entregar herramientas efectivas para que los trabajadores de ferias libres puedan afrontar procesos estresantes.

Palabras clave: trabajadores de ferias libres, satisfacción con la vida, estrés psicológico, trabajadores informales



UNIVERSIDAD DE TARAPACÁ
Universidad del Estado

1. INTRODUCTION

Labour activity represents a significant life domain for most adults around the world. It is estimated that almost 60% of the world's population spends one-third of their adult life at work, contributing actively to the development of themselves, their family, and societies (World Health Organisation, 1995). Previous research has demonstrated a dual relationship between employee mental health and labour activity, whereby labour activity can increase employee mental health. However, labour activity can also affect employee psychological distress, causing opposing consequences (Schulte & Vainio, 2010; Slade et al., 2009; Wong et al., 2019).

First, research has demonstrated that labour activity has a positive relationship with employee mental health (LaMontagne et al., 2010; LaMontagne et al., 2014; Milner et al., 2017). Some employee benefits include better mental and physical health, self-realisation, meaningful relationships between colleagues, and a flourishing state (Milner et al., 2017). Furthermore, this relationship positively impacts employee life satisfaction (Vorina, 2013). Particularly, research developed in Chile has demonstrated this positive relationship between labour activity and life satisfaction (Montero & Miranda, 2020).

However, research has highlighted that labour activity can harm employee mental health (Wong et al., 2019). The origin of commonly identified workplace psychosocial risk factors such as long working hours, job strain and bullying is related to increasing employee psychological distress (McTernan et al., 2013; Wong et al., 2019). Research developed with samples of Chilean employees has informed the presence of psychological distress related to labour activity in formal organisations, including educational employees (Zuniga-Jara & Pizarro-Leon, 2018) and public health employees (Ceballos-Vásquez et al., 2019; Muñoz et al., 2015). Even though the occurrence of life satisfaction and psychological distress are well documented in formal labour, research considering informal workers (e.g., street-market workers) is scarce and deserves more attention. Thus, this exploratory research is aimed to explore the presence of these variables and their relationship in a sample of street-market workers in the north of Chile.

During the last two decades, the focus in psychology has shifted from negative features and mental illness to positive human features and strengths of individuals; this research line is called positive psychology (Seligman et al., 2005; Wehmeyer, 2013; Williams et al., 2017). The primary aim of positive psychology is to provide comprehensive and balanced scientific knowledge to build and enhance individuals, families, and organisations (Seligman & Csikszentmihalyi, 2000). This line of positive research is a growing interest in concepts such as happiness, subjective well-being and life satisfaction (Pavot & Diener, 2008). These concepts are related, but they are conceptually different (Singh & Duggal, 2008).

On the one hand, happiness has been defined as both visions, hedonic and eudemonic (Fisher, 2010; Kesebir & Diener, 2008). From the hedonic vision, happiness is defined as the presence of pleasant feelings, while from the eudemonic vision, happiness involves virtuosity, morality, authenticity, and life meaning (Ryan & Deci, 2001; Ryff & Singer, 2008). On the other hand, subjective well-being is the appraisals individuals make about the quality of their lives. This evaluation includes two spheres: emotional and cognitive. The emotional appraisal is a comparison between pleasure and unpleasant emotions. Meanwhile, cognitive appraisal refers to the individuals' judgments about their lives (Diener et al., 2018). This cognitive evaluation is the perception of life satisfaction (Diener et al., 1985).

One study developed by Veenhoven (1996) proposed that satisfaction is a state of mind in which individuals appraise something in the short or long term. Life satisfaction has been defined as a "cognitive evaluation of one's life" (Diener, 1984, p. 550). Thus, life satisfaction represents the cognitive sphere of subjective well-being, and refers to the global evaluation of one's quality of life (Peterson et al., 2005). This evaluation is based on individual criteria (Shin & Johnson, 1978). Thus, individuals contrasted their perceptions of their lives and imposed self-demanding standards on themselves. According to the similarity in this contrast, individuals report their perception of life satisfaction (Pavot & Diener, 2009).

Although there are agreements about the relevant components of a good life, including health and successful interpersonal relationships, individuals assign different priorities or standards of success to each of these components (Diener et al., 1985; Pavot & Diener, 2008, 2009). Consequently, to understand the perception of life satisfaction of individuals, it is necessary to ask them about it globally instead of assessing specific areas of their lives. (Frisch et al., 1992; Pavot & Diener, 2008).

Under this conception of life satisfaction, Diener et al. (1985) developed a measure to assess the global perception of life satisfaction under the name the Satisfaction with Life Scale, SWLS. Numerous studies have established that this scale has adequate psychometric properties, stability, and sensitivity to detect changes over time in the perception of individuals' life satisfaction (Avey et al., 2008; Diener et al., 1993; Pavot & Diener, 1993; Pavot & Diener, 2008, 2009). Pavot and Diener (2013) established that individuals with high perceived life satisfaction scores on the SWLS show a strong appreciation for their lives and positive feelings about things working well for them. Conversely, lower scores on the SWLS indicate that the respondent demonstrates extreme dissatisfaction with their current life and life circumstances.

Previous research has indicated that life satisfaction has a positive relationship with desirable individual outcomes and is negatively related to undesirable outcomes. For example, it is reported that life satisfaction is po-

sitively related to mental and physical health (Diener & Biswas-Diener, 2008). Additionally, it has been pointed out that a significant positive relationship exists between life satisfaction and general health and longevity (Pavot & Diener, 2013). A cross-cultural study by Matheny et al. (2008) reported that stress-coping strategies have a significantly positive relationship with life satisfaction. On the contrary, poor life satisfaction is related to a high perception of psychological distress (Matheny et al., 2008) and is associated with physical and mental health issues (Huebner et al., 2006).

Life satisfaction has also been considered in research in labour settings (Di Fabio & Gori, 2020; Henderson et al., 2005; Merino et al., 2021; Park et al., 2018). It has been reported that employees with high levels of life satisfaction have lower levels of psychological distress associated with labour activity and can establish positive social relationships with their co-workers (Diener & Seligman, 2002; Friedman et al., 2002). Furthermore, it has been stated that life satisfaction has a positive relationship with affective organisational commitment and work engagement (Field & Buitendach, 2011; Polo-Vargas et al., 2017). On the other hand, it has been established that life satisfaction has a negative relationship with psychological distress associated with labour activity (Simard et al., 2022).

Psychological distress associated with work activity is considered a significant challenge faced by workers and societies worldwide (Brown & Quick, 2016; Leka et al., 2003). Indeed, mental health issues, including psychological distress, are the prevalent diseases that report the gravest burden of disease in years of life lost due to disability (Ansoleaga et al., 2014; LaMontagne et al., 2014). For example, in Chile, the total cost of work disability caused by mental health issues has increased in recent years, with 22.9% in 2018, 23.6% in 2019, and 28.7% in 2020 of the total number of medical leaves taken (Superintendencia de Seguridad Social, 2019, 2021). Furthermore, the evidence shows that 2 of 3 medical leaves of mental health issues correspond to women (Superintendencia de Seguridad Social, 2021).

Although the aetiology of mental illness is complex including a wide range of individual factors, it has been established that psychological distress associated with work activity contributes significantly to mental health issues (Muntaner et al., 2017; Page et al., 2014). Previous international research has identified specific organisational stressors that contribute to generating psychological distress in employees (LaMontagne et al., 2014), including, the combination the combination of high job demands and low control by them (LaMontagne et al., 2008; Stansfeld & Candy, 2006), job insecurity and mobbing (LaMontagne et al., 2011), work overload (Kan & Yu, 2015), role ambiguity, aggressive work environments, low autonomy and poor career development opportunities (Colligan & Higgins, 2006), among others organisational

variables. These can potentially cause a series of symptoms associated with psychological distress associated with labour activity.

A large and growing body of literature has investigated the consequences of psychological distress associated with labour activity. For example, it has been documented that stressful conditions can cause anxiety and affective disorders such as depression in employees (Cardozo et al., 2012; Maes et al., 2011), absenteeism, low productivity and organisational dysfunction (Colligan & Higgins, 2006). Furthermore, a consequence of chronic exposure to organisational stressors is the syndrome of burnout (Kumar, 2016), which represents a state of depleted psychological resources (Lapa et al., 2017). Finally, untreated psychological distress may result in reversible and non-reversible pathologies, including high blood pressure, psychosomatic issues, acute depression, and suicide (Marchand et al., 2005).

The Chilean government has determined to assess psychological risks on a mandatory basis to reduce these undesirable consequences and establish preventive actions (Superintendencia de Seguridad Social, 2016). This evaluation is undertaken with the scale of the psychosocial risk CEAL-SM/SUSESO. The assessment is carried out by Labour Insurance Administration Organisations, which are administrators of the law 16,744 of work accidents and diseases (Superintendencia de Seguridad Social, 2016). Labour Insurance Administration Organisations also provide advice to prevent employees' mental health issues. The workers protected by this law are dependent, independent (liberal professionals), some specific students, and union leaders in the exercise of their activity (Biblioteca del Congreso Nacional de Chile, 2021). However, this legislation excludes informal workers, such as street-market workers, unless they voluntarily pay for this insurance. These workers are usually excluded from these preventive or reparatory initiatives since they are relatively invisible to governments and social organisations, a situation that must be reversed (Griffin et al., 2020).

Informal workers have a relevant role in developing countries' economies, such as Chile (Bonnet et al., 2019). At a worldwide level, it is estimated that the number of informal workers has risen to 2 billion, representing 60% of the world workforce (Deléchat & Medina, 2020; International Labour Organization, 2020). Despite these workers' contributions to their local economies, they do not have a secure salary or social and health protection and constantly face job instability (Griffin et al., 2020). Consequently, these workers are often under or in the poverty line and doing their labour activities in adverse and precarious conditions (International Labour Organization, 2002). Street-market workers can also be considered precarious workers. Precarious work has been conceptualised as a labour activity that involves high instability and insecurity, such as a low level of regulatory protection and

social or economic vulnerability (Benach et al., 2014; Campbell & Price, 2016).

This situation in Chile is not far from the world's reality. According to the Instituto Nacional de Estadísticas (2022), the proportion of informal workers in the January - March 2022 quarter corresponds to 27.2% of the country's labour force. This percentage represents an increase of 0.6% compared to the same quarter of the previous year. In particular, according to the first registry of street markets carried out by the Servicio de Cooperación Técnica (2016), there are 1,114 street-markets in Chile. It was impossible to have an accurate number of street-market workers because most of them worked in more than one street-market. However, it is estimated that around 340,000 of them are across the country (Servicio de Cooperación Técnica, 2016). According to this registry, 30% of the street-market workers do not have public or private health insurance, and 71% do not contribute to their retired pension. All these shortcomings have a repercussion on them; the report explains that one of their major concerns is their whole health (Servicio de Cooperación Técnica, 2016).

The literature has identified a considerable number of labour variables that are related to psychological distress (Brown & Quick, 2016; LaMontagne et al., 2016) and life satisfaction (Westerhof & Keyes, 2010), including leadership, organisational climate, culture, and commitment (Dollard et al., 2012; King & Haar, 2017; McTernan et al., 2013). These variables are from formal organisations (Robbins & Judge, 2017) and not from informal organisations, the source of the street-market workers. Furthermore, there needs to be more research focused on the presence of psychological distress and life satisfaction among these workers.

For example, from a theoretical perspective, it has been suggested that street-market workers have precarious working conditions related to a significant psychological burden (Messing et al., 2003). Precarious work has been conceptualised as uncertain, unstable, and insecure work in which workers face the risks of working alone and receive limited social and legal protections (Hewison et al., 2016; Rodgers & Rodgers, 1989). It has been proposed that in this kind of labour activity, women are predominantly more exposed to suffering psychological distress (Keegel et al., 2009; LaMontagne et al., 2013; Messing et al., 2003). It has been established that these workers have low capabilities or knowledge, which raises the probability of suffering psychological distress (Benach & Muntaner, 2007; LaMontagne et al., 2013). From a practical perspective, in a study conducted among street-market workers in Nicaragua, Espinoza and Guevara (2015) reported that these workers have higher levels of psychological distress than the general population. Finally, in a study developed in Mexico by Valdez et al. (2021), it was described that street-market women worker suffers from middle to severe psychological distress, and the factors

that contributed to their detrimental mental health were worried about health and their dual roles in managing work and family.

Therefore, it is possible to argue that street-market workers faced adverse conditions, including unsafe working environments, long working hours, reduced or no access to social or financial protections, and discrimination. These conditions may further undermine their mental well-being and limit access to mental health care. Notwithstanding these research contributions, the study about the presence of life satisfaction and psychological distress in street-market workers in Chile is scarce. Therefore, this study aims to fill the gap in the local literature by studying these variables and their relationship to contribute to a better understanding of these variables in a population with lower academic attention.

2. METHODS

2.1. Sample and procedure

An exploratory study with a cross-sectional design was conducted to establish the relationship between psychological distress and life satisfaction among street-market workers in Chile. The inclusion criteria were to be a street-market worker in Arica. This research design is handy for conducting exploratory research to provide initial evidence about variables of interest that deserve attention (Spector, 2019). A self-report survey was chosen as an appropriate methodology for this study (Liamputtong, 2017). Self-report surveys help identify and describe participants' psychological features from their perspectives, including subjective experiences (Paulhus & Vazire, 2007), such as psychological distress and life satisfaction. A paper-based survey was the data collection mode chosen in this research. Even though online surveys are gaining popularity in academia due to their benefits (Paulhus & Vazire, 2007), this technique was not considered due to the sample characteristics. A paper-based survey stimulated responses from older, less educated, low-income individuals (McMaster et al., 2017), such as street-market workers. Furthermore, a paper-based survey may produce higher response rates than other techniques for data collection (Dillman et al., 2014).

Written informed consent was obtained from the study participants, informing them about the research objectives. It was established that participation in the study was voluntary and did not imply any incentive or price to participants. Furthermore, participants were not asked to provide any personal or identifying information, such as names, phone numbers or email addresses, were requested from participants. Finally, participants were informed they could withdraw from the research at any stage. As a result, a sample of 189 street-market workers from Arica city in Chile was achieved using convenience sampling. This technique is the most used sampling in social sciences; members of the target population (e.g., street-market workers in Chile) that meet practical criteria (e.g. availabi-

lity) are included to achieve the research aims (Burton et al., 2018).

It is relevant to mention that four participants were under 18 years old. They were with their guardians or parents at the moment of the questionnaire application. Thus, the guardian or parent assent was achieved for each of them.

2.2. Stages of data analysis

The study analyses consisted of five stages: descriptive statistics analysis, reliability analysis, mean comparison across groups, correlation analyses, and linear regression analyses. The analyses were conducted with IBM SPSS Statistics Version 24 (IBM Corp, Released 2016).

3. MEASURES

The variables of interest in this study, life satisfaction and perceived stress, are complex, may vary from one individual to another, and cannot be observed directly. Thus, two self-reported measures or questionnaires were considered a feasible alternative for measuring and operationalising these variables.

3.1. Life Satisfaction

The perception of life satisfaction was measured using the scale developed by Diener et al. (1985) in its Spanish language version. This version has been validated in Chile by Bagherzadeh et al. (2018). The authors confirmed that the Spanish version of the SWLS is a valid and reliable scale to measure life satisfaction perception in the Chilean population (.80). The SWLS questionnaire is a single-factor measure comprised five items. Each item is rated by participants using a 5-point Likert scale (1=strongly disagree, 5=strongly agree). The average of the five items determines the overall score for life satisfaction. Higher scores reflect higher levels of life satisfaction. Some examples of items are: “*Las condiciones de mi vida son excelentes*”, “*Estoy satisfecho(a) con mi vida*” (Bagherzadeh et al., 2018).

3.2. Psychological Distress

The perception of psychological distress was measured using the Perceived Stress Scale (PSS) developed by Cohen et al. (1983) in its Spanish language version (Remor & Carrobes, 2001). Tapia et al. (2007) have validated this version in Chile. The authors confirmed that the Spanish version of the PSS is a valid and reliable scale to

Table 1
Sociodemographic Characteristics of Participants at Baseline

Baseline characteristic	Female		Male		Full Sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Education						
No-education	1	0.7	0	0	1	0.5
Primary	27	22	8	14.8	35	18.5
Secondary	72	53.3	22	40.7	94	49.7
Technical	24	17.8	15	27.8	39	20.6
Tertiary	11	8.1	9	16.7	20	10.6
Nationality						
Chilean	114	84.4	45	83.3	159	84.1
Foreign	21	15.6	9	16.7	30	15.9
Income type						
Daily	69	51.1	33	61.1	102	54
Weekly	55	40.7	13	24.1	68	36
Monthly	11	8.1	8	14.8	19	10.1
Working with						
Alone	86	63.7	31	57.4	117	61.9
Family/Relatives	36	23.7	19	35.2	55	29.1
Friends	10	7.4	3	5.6	13	6.9
Employees	3	2.2	1	1.9	4	2.1
Main provider						
Yes	49	36.3	22	40.7	71	37.6
No	86	63.7	32	59.3	118	62.4

measure psychological distress in the Chilean population (.79). The PSS questionnaire is a single-factor measure comprised of 14 items. Each item is rated by participants using a 5-point Likert scale (1=Never, 5=Almost Always). The average of the items determines the overall score for perceived stress. Higher scores reflect higher levels of perceived stress. Some examples of items are: “¿En el último mes, te has sentido molesto a causa de alguna situación inesperada?”, “¿En el último mes, sentiste que los problemas se te habían acumulado?” (Tapia et al., 2007).

3.3. Sociodemographic

Sociodemographic information was asked about gender, age, nationality, labour seniority, aboriginal heritage, children, and weekly incomes.

4. RESULTS

4.1. Frequency

A sample of 189 street-market workers from Arica City in Chile (71.4% women, 28.6% male; 84.1% Chilean, 15.9% Foreign) was achieved, aged between 16 and 79 ($M = 42.00$; $SD = 15.573$). The sample was balanced across six street markets located in Arica city, north of Chile (STM1 = 34, STM2 = 22, STM3 = 35, STM4 = 44, STM5 = 22, and STM6 = 32). A detailed breakdown of sample demographics is presented in Table 1. It is relevant to mention that 16 participants were excluded from the total sample due to their delivered incomplete scales. As explained before, there needs to be a census of street-market workers. Consequently, it was decided to have the study performed in the selected markets because they are located in densely populated suburbs.

As can be seen in Table 1, female participants mainly constituted the sample (71.4%). Most participants have secondary education (49.7%). Furthermore, a significant fraction of the participants reported being Chilean (84.1%). Most participants declare having daily incomes (54%) and working alone (61.9%). Finally, most participants are not the leading household provider (62.4%).

4.1. Reliability

The reliability was calculated for both measures. First, the correlations obtained between the total of the

SWLS and its items were significant. As shown in Table 2, the fluctuation was between .712 and .787. Second, the correlations obtained between the total of the PSS and its items were significant. Table 3 shows that the fluctuation was between .139 and .625.

Furthermore, the internal consistency of the scales chosen was calculated. The most common measure used to assess internal consistency is Cronbach's alpha, which explains how closely related a set of items is as a group (Cortina, 1993). Thus, reliability tests were conducted to measure the internal consistency of the research instruments SWLS and PSS. Acceptable values of Cronbach's alpha for exploratory research are $\alpha = .70$ or higher for each measure (Hair, 2006). Both scales, SWLS and PSS, displayed reliable values for Cronbach's Alpha (Taber, 2018), ranging $\alpha = .81$ and $\alpha = .80$, respectively. These values are similar to the original Cronbach's alpha values reported by Diener et al. (1985) and Cohen et al. (1983). Furthermore, the values are similar to the Cronbach's alpha values reported in the SWLS (.80) by Bagherzadeh et al. (2018) and in the PSS (.79) by Tapia et al. (2007) in the Spanish version of the questionnaires.

4.2. Mann-Whitney U test analyses

Independent sample t-tests were attempted to test for statistically significant differences in mean scores for each variable between female and male and Chilean and foreign street-market workers. However, based on the unequal sample sizes between the interest groups, the Mann-Whitney U test was performed to compare whether there is a difference in the variable of interest. Analyses revealed no significant differences between female and male street-market workers' perceptions of life

Table 2

Total Item correlation of the SWLS

	r i-t
SWLS Item 1	.712**
SWLS Item 2	.787**
SWLS Item 3	.775**
SWLS Item 4	.720**
SWLS Item 5	.753**

Note: ** $p < .01$. SWLS= Satisfaction with Life Scale

Table 3

Total Item correlation of the PSS

	r i-t
PSS Item 1	.549**
PSS Item 2	.619**
PSS Item 3	.625**
PSS Item 4	.444**
PSS Item 5	.265**
PSS Item 6	.466**
PSS Item 7	.587**
PSS Item 8	.517**
PSS Item 9	.411**
PSS Item 10	.483**
PSS Item 11	.585**
PSS Item 12	.139*
PSS Item 13	.475**
PSS Item 14	.620**

Notes: ** $p < .01$. * $p < .05$. PSS = Perceived Stress Scale.

satisfaction. However, as presented in Table 4 and Figure 1, analyses revealed significant differences between female and male participants in their perceived psychological distress, in which scores of females (Mdn = 33) were higher than male street-market workers (Mdn = 29). A Mann-Whitney U test indicates that this difference was statistically significant, $U(N_{\text{females}} = 135, N_{\text{males}} = 54) = 2534.000, z = -3.112, p < .05$. This difference has a moderate Hedge's effect size (Hedges, 1981).

4.3. Correlations Analyses

Correlation analyses were undertaken to evaluate the strength of relations between the variables involved in this study. Correlations were performed to address the relationship between age, education, number of family members, Life Satisfaction, and perceived psychological distress. Means, standard deviation, and Pearson matrix correlation are presented in Table 5.

Results showed that SWLS has negative and significant relations with PSS. Furthermore, age has a negative and significant relationship with education.

4.4 Linear Regression Analyses

After correlation analyses, a linear regression analysis was performed to establish the relationship between Life Satisfaction (SWSL as a predictor variable) and the perception of psychological distress (PSS as an outcome variable). Linear regression analysis is a valuable statistical technique widely used in social research to assess a complete model of the relationship between variables of interest (Angelini, 2019). This statistical technique estimates how much the outcome (e.g., perception of psychological distress) will change when the predictor variable (e.g., Life Satisfaction) changes; as the predictor variable increases, the outcome variable also increases

(Montgomery et al., 2012). No inferences about prediction over time can be made from this relationship. The analyses revealed that the Life Satisfaction result explains a significant amount of the variance in perception of psychological distress results, $F(1,185) = 54.390, p = .000, R^2_{\text{square}} = .227$. A graphical representation is shown in Figure 2.

The figure shows a negative tendency for Life Satisfaction (SWLS) and perception of psychological distress (PSS) that as the independent variable increases (perception of psychological distress), the dependent variable (Life Satisfaction) tends to decrease for the street-market workers. The trend line has a negative slope, which shows a negative relationship between SWLS and PSS. The points in the graph are reasonably clustered on the trend line, reflecting a moderated relationship between the variables of interest. Indeed, $R^2_{\text{adjusted}} = .23$ indicates that Life Satisfaction accounts for 23% of the perception of psychological distress variance. Life Satisfaction predicts the perception of psychological distress reasonably moderately in this sample.

5. DISCUSSIONS AND CONCLUSIONS

Although organisational research has deeply studied both concepts, Life Satisfaction and perception of psychological distress and its relationship, this relationship has yet to be explored in depth in informal organisations. Furthermore, research among street-market workers to explore differences in individual outcomes between groups of interest is scarce in Chile and requires more attention. Therefore, this study was designed to fill these gaps in the literature by investigating the relationship between Life Satisfaction and perception of psychological distress in a sample of Chilean street-market wor-

Table 4
Mann-Whitney Test PSS for females and male street-market workers

	Females (n=135)	Males (n = 54)	U	p	g
	Mdn	Mdn			
PSS	33	29	2534.000	.002	0.611

Notes: * $p < .05$. PSS= Perceived Stress Scale.

Table 5
Means, standard deviation, and Pearson correlation matrix

	M	SD	1	2	3	4
1 Age	42.38	15.57	1			
2 Education	3.22	.889	-.26*	1		
3 SWLS	4.40	1.06	-.08	.08	1	
4 PSS	4.45	1.21	-.10	.41	-.50*	1

Note: * $p < .01$ level. SWLS = Satisfaction with Life Scale; PSS = Perceived Stress Scale.

Figure 1
Total Item correlation of the SWLS

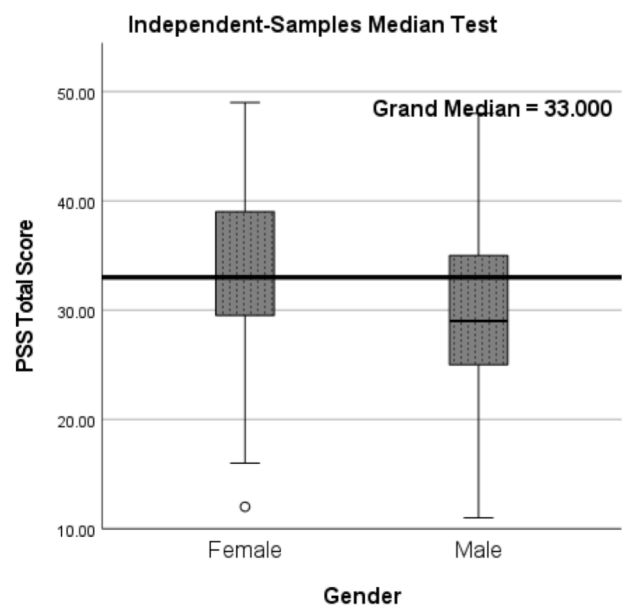
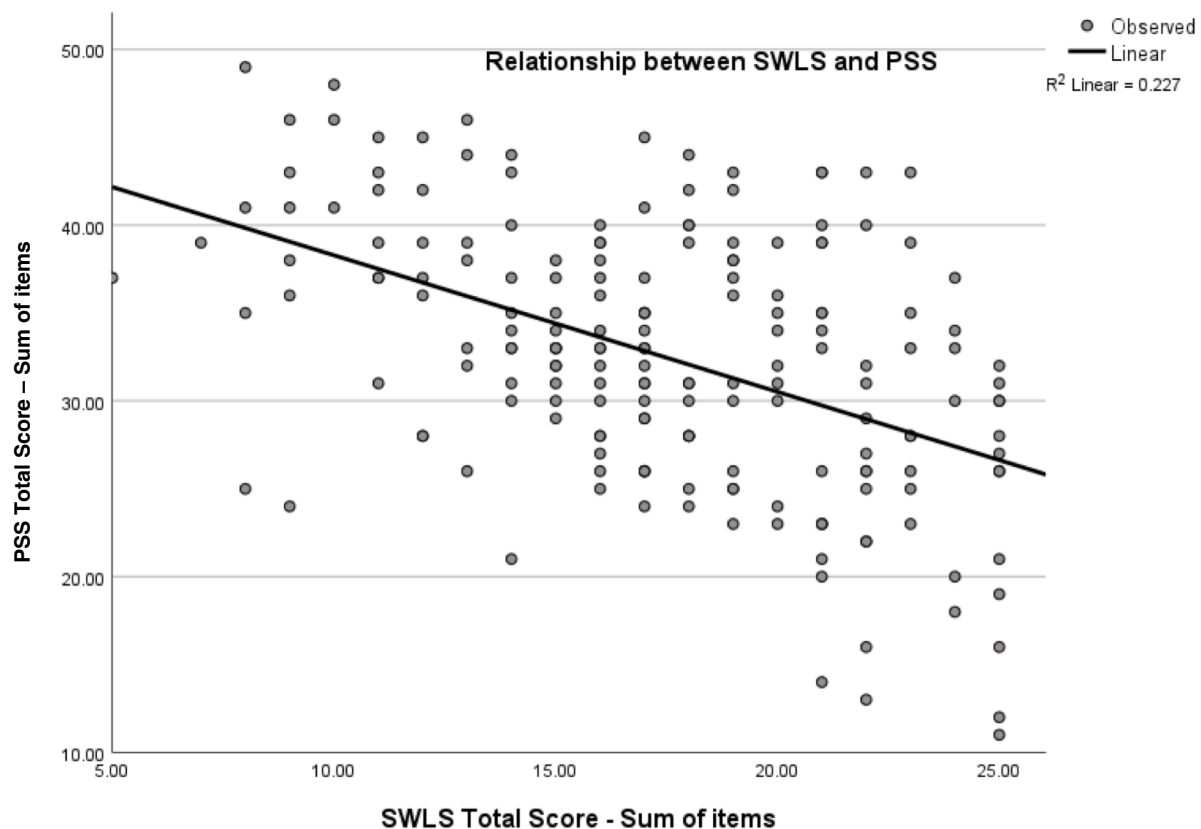


Figure 2
Scatterplot Bivar Life Satisfaction (SWLS) and Perception of Psychological Distress (PSS)



kers. This exploratory research has achieved some relevant findings.

First, as shown in Table 4 and Figure 1, the results indicate differences between female and male street-market workers. Indeed, male street-market workers have a significantly lower perception of psychological distress than their female counterparts. Previous research has not explored this difference in detail among informal workers. However, this result concords with previous international (LaMontagne et al., 2013; Page et al., 2014) and Chilean research in formal organisations (Güilgüiruca et al., 2015), which has shown that female workers have higher rates of psychological distress than male workers. It has been proposed that this difference is based on the dual role, in which the interface family work is stressful for them (Herman, 2015). The dual role of women in managing their work responsibilities and family roles brings them to a crossroads in seeking a balance between home and work (Rahim et al., 2019).

The literature has suggested that the dual role of women is based on the amount of pressure they experience. Working wives carry a heavier burden for females because they are disproportionately responsible for domestic tasks (Bisen & Bisen, 2019) and are likely to play the role of the primary caretaker even when they return to the workplace after having children (Field & Bramwell,

1998). Consequently, the level of psychological distress of female street-market workers might be increasing constantly due to the dual-role.

This evidence has significant conclusions for female street-market workers' mental health. They seem to be a group with high levels of vulnerability to suffering mental health issues, including psychological distress. Thus, it might be necessary to establish public policies to actively assist this group to prevent or reduce undesirable consequences in their mental health.

Second, as shown in Table 5, the street-market workers' means for Life Satisfaction (SWLS $M=4.40$) and perception of psychological distress (PSS $M=4.45$). These results differ from previous local research using the same scales. First, it has been reported higher levels of Life Satisfaction among the general population (Schnettler et al., 2014; Vera Villarroel et al., 2012), the elderly (Ramírez-Pérez & Lee-Maturana, 2012), immigrants in Chile (Berríos-Riquelme et al., 2021) and tertiary students (Schnettler et al., 2021). Furthermore, lower results of perceived psychological distress have been reported among adult students (Tapia et al., 2007) and tertiary students (Gambetta-Tessini et al., 2013). Therefore, the sample of street-market workers showed poor indicators of Life Satisfaction and perceived psychological distress than samples of previous research.

A plausible explanation for these differences might be rooted in the street-market workers' precarious working conditions. Indeed, previous research supports this explanation by demonstrating a relationship between work precariousness and reduced mental health (Bhattacharya & Ray, 2021; Messing et al., 2003). Moreover, precarious work produces undesirable individual outcomes, including psychological distress (Ray et al., 2017) and poor evaluation of life satisfaction (Benach et al., 2014; Umičević et al., 2021). Therefore, employment quality, security and stability significantly impact employees' mental well-being, including street-market workers. It might be relevant for this kind of worker because they are characterised by work process inclusion, social disintegration, uncertainty and lower job quality conditions.

Previous local research has explored the prevalence of Life Satisfaction and perceived psychological distress among Chilean employees in different labour contexts. However, research focused on these variables among Chilean street-market workers is scarce and requires more attention. Recent international research has highlighted an increase in mental health issues due to insecure and precarious working conditions (Jonsson et al., 2021; Julià et al., 2017; Vancea & Utzet, 2017), such as street-market workers. Precariousness directly and profoundly impacts employee mental health (Vives et al., 2013), which is usually related to the perception of psychological distress (Jonsson et al., 2021). Furthermore, precarious working condition is a relevant determinant for the subsequent psychological distress in previously mentally healthy workers. Therefore, further research may consider these explanations to comprehensively understand the presence of life satisfaction and psychological distress among this group of Chilean workers.

The local literature has highlighted the relevance of studies focused on Life Satisfaction and psychological distress because Chilean employee mental health issues have increased in recent years (Fernández Espejo & Solari Montenegro, 2017; Salgado-Roa & Lería-Dulčić, 2020). Additionally, there is a pressing need for further research exploring Life Satisfaction and the perception of psychological distress among free market workers in Chile. First, a step forward must be taken to establish the relationship between these variables.

Therefore, this study was designed to fill this gap in the literature by investigating the relationship between life satisfaction and the perception of psychological distress in a sample of Chilean street-market workers. As shown in Table 5, the general results explain that Life Satisfaction has a negative and significant relationship with the perception of psychological distress. The core results from this exploratory study provide preliminary support that the perception of psychological distress is a statistically significant predictor of Life Satisfaction in a sample of Chilean free-market workers (Figure 2). This result is concordant with previous research findings, which have

suggested a negative relationship between the perception of psychological distress and Life Satisfaction in young, middle-aged and older adults (Hamarat et al., 2001), hospitality workers (Hayes & Weathington, 2007), college students (Holinka, 2015), and university students and academics (Victorio, 2008)

Considering the results, it is possible to assume a model that suggests that psychological distress significantly affects life satisfaction. Decreased levels of stress lead to increased life satisfaction. In other words, free-market workers with high levels of perceived psychological distress tend to experience lower life satisfaction. Conversely, free-market workers with low levels of perceived psychological distress have high levels of life satisfaction.

Effective policies and action to improve mental well-being at work are critical to upholding the human right to good health (World Health Organization & International Labour Organization, 2022). According to these two organisations, local governments should establish and enforce laws, policies and guidance regarding mental health for informal workers. Silva-Peñaherrera et al. (2022) suggest that addressing informal employment might improve employee mental well-being in developing countries. Labour activity and living conditions are key variables of employee mental well-being that should be considered in preventive policies (Silva-Peñaherrera et al., 2022).

This study contributes to the literature on life satisfaction and perception of psychological distress in Chilean street-market workers. However, the study's findings must be viewed in light of limitations, providing insights into future research directions. First, as with any empirical research without an experimental research design, it is not possible to argue from these findings that the perception of psychological distress is causally related to life satisfaction. As cross-sectional data were collected from a homogenous sample at one point in time, causal inferences based on correlations and regressions must be taken cautiously (Jager et al., 2017). Secondly, the current study had relatively few participants, particularly men.

Finally, the study is a potential common method variance (CMV) bias. The literature has proposed three main actions to reduce CMV. First, consider different participants for the predictor and outcome variables (Podsakoff et al., 2003). However, this technique is not recommendable when the variables of interest capture individual psychological perceptions, such as life satisfaction and psychological distress; second, it minimises the similarities between the measures of predictor and outcome variables by modifying the scales (Podsakoff et al., 2012). However, modifying the scale formats might alter its conceptual meaning. Finally, use a time interval between the measuring predictor and outcome variables to reduce participants' tendency to use previous answers to inform subsequent items (Podsakoff et al., 2013). However, this action might have collateral and undesirable effects, increa-

sing research costs and participant attrition.

If it is impossible to control CMV, it should be considered a potential research limitation (Chang et al., 2010). Hence, rather than attempting these solutions to reduce CMV bias, a practical extension for future research could assess the same model by considering special attention to these limitations and including larger samples of street-market workers. Also, a practical extension for future research would be a longitudinal research design.

Notwithstanding these limitations, this exploratory research has provided significant results that may be considered for further research. These findings provide first-time evidence of a negative relationship between the perception of psychological distress and life satisfaction in a sample of Chilean street-market workers. Therefore, further research into specific interventions aimed at reducing psychological distress is likely to have significant positive results in assisting street-market workers in improving their life satisfaction.

Based on these findings, further research should be conducted using controlled experimentation to isolate the measurable impact of interventions to reduce psychological distress on life satisfaction. The initial results from this novel research can also serve as a catalyst for public institutions (e.g., local governments or municipalities) to explore ways to include street-market workers in micro-intervention programs to reduce psychological distress and help them improve their life satisfaction.

From a practical standpoint, public institutions (e.g., local governments, public health systems and municipalities) must take street-market workers' psychological distress seriously because its negative consequences might worsen if it is not correctly handled. It has been explained that the cost of mental health issues has increased in recent years considerably. Consequently, psychological distress should not be ignored. Furthermore, micro-interventions to reduce psychological distress can potentially enhance life satisfaction. Finally, this intervention could be implemented by the whole population or by considering a type of street-market worker, such as female workers, because they have higher rates of psychological distress.

The relevance of this research is proving evidence of a relationship between life satisfaction and perception of psychological distress in a sample of Chilean street-market workers. These results can lead to further research to explore this relationship deeply due to the negative impact of psychological distress on these workers. The results indicate that Chilean street-market workers' life satisfaction and psychological distress indicators are worse than those in previous research on different populations in Chile. Furthermore, the results explain that male workers have better indicators of life satisfaction and psychological distress than their female counterparts. These results need attention from public institutions to develop actions to reduce them.

DATA ACCESS STATEMENT

The raw data that support this article's findings will be made available by the corresponding author without undue reservation.

ETHICS STATEMENT

As this study involved human participants, its procedure was approved by the Dirección de Investigación y Postgrado de la Universidad de Tarapacá. The privacy rights of human subjects were consistently observed.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

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