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SAFETY CLIMATE FOR SITE ENGINEERS IN CONSTRUCTION SITES

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Abstract: This paper aimed to investigate the perceptions of site engineers regarding safety climate in Gaza Strip construction sites. It also explored the relationship between personal characteristics of site engineers and safety climate. The adopted methodology was based on comprehensive questionnaire targeting site engineers. A total number of Eighty eight questionnaires were distributed; Seventy three questionnaires were received and analyzed to achieve the objectives. Site engineers responded positively towards safety climate. Almost half of site engineers have never received any safety training. The results indicated that only marital status and safety training received, among all personal characteristics, have an influence on safety climate.

KEYWORDS: Safety, Construction Industry, Site Engineers, Gaza Strip.

المناخ الآمن لمهندسي الإشراف العاملين في المواقع الإنشائية

ملخص: يهدف هذا البحث إلى دراسة وجهة نظر مهندسي المواقع في قطاع غزة تجاه المناخ الآمن، إلى جانب فحص العلاقة بين الصفات الشخصية لمهندسي المواقع وبين المناخ الآمن، وقد اعتمدت الإستبانة كمنهجية للبحث حيث تم توزيع 88 استبانه في حين تم استعادة 73 استبانة فقط حيث تم تحليلها للوصول إلى أهداف البحث، وقد أظهرت النتائج وجهة نظر إيجابية تجاه المناخ الآمن، كما دلت النتائج أن مهندسي المواقع المتزوجين أو أولئك الذين تلقوا تدريب على السلامة يملكون وعي واهتمام أعلى بالمناخ الآمن، في حين أن باقي الصفات الشخصية ليس لها تأثير على المناخ الآمن.

I. INTRODUCTION

Culture in general, and safety culture in particular, is often characterized as an enduring aspect of the organization with trait-like properties and which is not easily changed. Lee [1] argued that "constructive attitudes among the workforce, because they result from all other contributory features, are probably the most important single index of the effectiveness of safety culture. Pidgeon [2] proffered an anthropological definition of safety culture "it is a culture that lies at the heart of the ideal-typical pattern of events leading up to large-scale failures of foresight, provides the conceptual foundation for an anthropological definition of a safety culture as being the set of assumptions, and their associated practices, which permit beliefs

about danger and safety to be constructed". Construction project safety culture is different from general organization safety culture in terms of scope and components [3].

Climate, on the other hand, can be conceived of as a manifestation of organizational culture exhibiting more state like properties [4]. Mearns et al. [5] proposed that safety culture will have an influence on safety climate and it could be argued that a 'good' safety culture will be promoted and maintained by a 'good' safety climate and vice versa. Climate can be viewed as a temporal state measure of culture, which is reflected in the shared perceptions of the organization at a discrete point in time [6]. Cox and Cox [7] argued that employee attitudes are one of the most important indices of safety culture and climate, as attitudes are often framed as a result of all other contributory features of the working environment. Lee [1] also proposed that attitudes towards safety are one of the basic components of a safety culture. Neal et al., [8] argued that general organizational climate is an important part of the matrix from which specific evaluations about safety originate [8]. It is widely accepted that unsafe behavior is intrinsically linked to workplace accidents. A positive correlation exists between workers' safe behavior and safety climate within the construction site environments. Construction workers' attitudes towards safety are influenced by their perception of risk, management, safety rules and procedures [9]. The construction industry experienced a disproportionately high rate of disabling injuries and fatalities for its size [10].

Safety is one of the most difficult issues facing the construction industry in the Gaza Strip. The accident rate in construction is the highest when compared with other industries. Statistics have remained reasonably constant over six years, it has the construction industry generally accounting for nearly 20% of all industrial injuries [11].The construction industry in Palestine has a very poor site safety record in comparison to other countries. There are no government regulations that managing construction safety which widely influence the safety performance or behavior. Furthermore, there are serious commitment problems towards safety of all levels of management. The objective of this paper is to explore and investigate safety climate and behavior in Gaza Strip construction industry.

II. LITERATURE RIVIEW

A. Definitions of Safety Climate

Zohar [12] coined the term safety climate in an empirical investigation of safety attitudes in manufacturing industry, and defined it as a summary of moral perceptions that employees share about their work environments. Recently, Niskanen [13] defined safety climate as a set of attributes that can

be perceived about particular work organizations and which may be induced by the policies and practices that organizations impose upon their workers. Therefore, the definitions of safety climate are clearly related to those of safety culture. Guldenmund [14] pointed out that shared aspects are stressed in both sets of definitions. The main differences in the definitions are that whereas safety culture is characterized by shared underlying beliefs, values, and attitudes towards work and the organization in general. While safety climate appears to be closer to operations, and is characterized by day-to-day perceptions towards the working environment, working practices, organizational policies, and management.

B. Dimensions of Safety Climate

Dimensions of safety climate are the major features or levels of safety climate [15]. Many researchers attempt to construct the dimensions of safety climate. The first attempt was constructed by Zohar [12] who examined eight factors: the importance of safety, effects of required work place on safety, status of safety committee, status of safety officer, effects of safe conduct on promotion, level of risk at the work place, management attitudes to safety, and the effect of safety conduct on social status. In 1993 Donald and Canter [16] developed the Safety Attitude Questionnaire (SAQ) to measure attitude, which comprised of 16 scales. The rationale was that surveying workers' safety attitudes, using questionnaires as measurement instruments, appear to be similar to management safety audits.

The Safety Attitude Questionnaire was used in safety research in more than 40 companies over 6 years, and found to be a valid and reliable instrument in predicting safety performance. Coyle et al. [17] suggested that no universal set of safety climate factors existed. Health and Safety Executive of the United Kingdom (HSE) developed a Health and Safety Survey Tool which include 10 factors: organizational commitment and communication, line management commitment, supervisor's role, personal role, fellow worker influence, competence, risk taking behavior and some contributory influences, some obstacles to safe behavior, permit-to-work, and reporting of accidents and near misses [18].

Williamson et al. [19] concluded that a safety climate measure including four measuring attitudes and four perceptions. Dedobbeleer and Beland [20] tested two factor models. The first factor was labeled management commitment to safety and consisted of: workers' assessment of management's attitude toward safety practices and workers' safety, workers; perception of foremen's behavior, availability of equipment, and safety training at the time of initial employment. The second factor was workers' involvement in safety comprised of: workers perceived susceptibility to

injury in the next year, risk taking at work, personal control over safety at work, and the existence of regular job safety meetings [20].

Flin et al. [21] identified the common features of safety climate by reviewing 18 safety climate reports published from 1980 to 1998. From these reports, he found that the frequency used themes for describing the dimensions of safety climate were management, safety system, risk, work pressure, competence, and procedures. Another similar study was conducted by Guldenmund [14] and the output of reviewed 15 safety reports were management, risk, safety arrangements, procedures, training, and work pressure.

Glendon and Litherland explored the safety climate in a road construction industry. Through factor analysis, it was found that safety climate dimensions were: communication and support, adequacy of procedures, work pressure, personal protective equipment, relationships, and safety rules [22]. Mohamed [23] identified 10 dimensions to describe the safety climate in construction site environment. These dimensions were: commitment, communication, safety rules and procedures, supportive environment, supervisory environment, workers' involvement, personal appreciation of risk, appraisal of work hazards, work pressure, and competence. Safety climate research typically focuses on employee attitudes and perceptions relating to the structures, processes and procedures used by an organization which bear on safety and the perceived priority the organization's leadership places on safety [24, 25].

Fang et al. [26] listed ten safety climate factor structure including: safety attitude and management commitment, safety consultation and safety training, supervisor's role and worker's role, risk taking behavior, safety resources, appraisal of safety procedure and work risk, improper safety procedure, worker's involvement, worker's influence and competence.

C. Personal Characteristic and Safety Climate

When conducting research, many studies have collected personal information about the respondents such as age, gender, marital status, education level, working experience in the industry. These demographic factors can influence safety climate and consequently influence the individual safety behavior [10]. Lee and Harrison [27] investigated risk perceptions to safety by using a 120-item questionnaire in three nuclear power stations in UK. Major differences by gender, age, shift/days and work area were found to be linked with prior accident involvement of the employees.

Glendon and Litherland [22] found that six-factor structure of safety climate in a road construction organization. Sttistical tools were used to compare the

factor structures of two subgroups: construction vs. maintenance workers. The study identified differences in the safety climate of job sub-groups on two of the factors: 'relationships' and 'safety rules'. Siu et al. [28] investigated age difference in safety attitudes and safety performance of Hong Kong construction workers with data collected from 374 Chinese construction workers on 27 construction sites. Their study found that older workers were exhibiting more positive attitudes to safety.

Fang et al. [26] used logistic regression to explore the relationship between safety climate and personal characteristics. Statistically eight personal characteristics namely age, marriage status, family responsibility, education level, safety knowledge, alcohol drinking habit, employee of prime contractor or subcontractor, and breaking safety procedures or not at work, were found to be related to good or bad safety climate. Five variables including gender, work experience with the company, work experience in the construction industry, whether injured or not, and smoking habit were found to have no influence on safety climate. Nonetheless, Cooper and Philips [29] suggested that; differences in types of work activity and other site situational condition are much more important in climate research than personal demographical variables such as age, job experience, or accident involvement. This finding makes sense as safety climate measures tend to capture employee's perceptions about how safety is operated on site. Safety climate does not tend to measure how the prevailing safety climate affects them as 'individual' who have longer work experience, older or younger workers. Nonetheless, empirical justification for using personal demographics as a validation technique is required if safety climate research is to continue progressing. Safety climate, its dimensions and demographic factors are reviewed above that are to provide the base for describing the present research including safety climate and its relationship with perceptual safety performance. Ali [9] invistigated the relationship between personal characteristics ans safety climate.

III. METHODOLOGY

A questionnaire survey was adopted in this study. The questionnaire is an effective data collection mechanism where the researcher knows exactly what is required, and how to measure the variables of interest. Since the survey is confined to Gaza Strip, which is a relatively small area, the questionnaires were administered personally at work places of crews. The design of questionnaire for this research was developed to measure safety climate in the construction industry which is the most popular method of measuring safety management performance. Recent investigations by Flin et al. [21], McDonald et al. [30], Mohamed [23], Ali [9], Fang et al. [26],

Chouhdry [32], Choudhry et al. [33] have made a significant contribution towards developing the structured questionnaire surveys adopted for research studies of safety climate. For this research study, the questionnaire survey was developed and included two parts: background information, safety climate survey. The background information includes age, marital status, and experience in the field of work and current company, employer, smoking habit, education level, family members to support, carrier, safety training, and training courses received. The safety climate questionnaire was based on Mohammed [23] research model with modifying four items; item SC05, SC41, SC51, and SC54. The dimensions comprised of 70 statements that represent the safety issues in organizational and individual levels.. Engineers were asked to endorse the statement using a five-point Likert-type scale (from 1 = "strongly disagree" to 5 = "strongly agree"). The data collected was analyzed using SPSS package 19. Kruskal-Wallis test was used to test the relationship between personal characteristics and safety climate. A total number of 88 were distributed, but only 73 questionnaires were received to represent the site engineers, perception.

IV. RESULTS AND ANALYSIS

A. Personal Characteristics

Table 1 showed the personal characteristics which represented the independent variables. Most of site engineers are less than 32 years old, married, have less than 10 years of experience, less than 5 of them with their current company and most of them are working with main contractors and in building projects. In addition, most of site engineers hold a bachelor degree, mostly in civil engineering, and don’t smoke with less than 2 family members to support.

Table (1): Selected Personal Characteristics – Site Engineers

Aspect	Categories	Percentage
Age	less than 25	23.3
	25 -less than 32	52.1
	32 - less than 39	9.6
	39 or more	15.1
Marital Status	Single	35.6
	Married	64.4
Experience in the Construction Field	Less than 3	37.0
	3 – Less than 10	43.8
	10 or more	19.2
Experience with the Current Company	Less than 1	43.8
	1 - Less than 5	38.4
	5 or more	17.8
Field of work	Buildings	80.8
	Roads	12.3
	Water and Sewage	4.1
	Others	2.7
Worker Employment	Contractor	75.3
	Subcontractor	1.4
	Others	23.3
Smoking Habits	Smoke even at work	28.8
	Smoke, but not at	9.6
	Don not Smoke	61.6
Educational Level	Bachelor	90.4
	Master	9.6
Table (1) continued		
Supported Family Members	None	24.7
	1 – 2	30.1
	3 – 4	19.2
	5 – 6	15.1
	7 or more	11.0
Career	Civil Engineer	74.0
	Arch. Engineer	16.4
	Industry/	1.4
	Electrical Engineer	1.4
	Others	6.8
Safety Training	Yes	49.3
	No	50.7

B. Safety Climate

Before the analysis of data, the reliability and validity of each dimension must be insured. The reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring. The less variation an instrument produces in repeated measurements of an attribute, the higher its reliability where validity refers to the degree to which an instrument measures what it is supposed to be measuring. Validity has a number of different aspects and assessment approaches. Table (2) shows the

values of Cronbach's Alpha for each filed of the questionnaire. For the fields, the values range from 0.442 and 0.904. This range is considered high. For the entire field "Safety climate", the Cronbach's Alpha equals 0.933. This result ensures the reliability of each field of this field. Table (2) also clarifies the correlation coefficient for each field of the questionnaire. The correlation coefficients of all fields are significant at $\alpha = 0.05$.

Table 2: Cronbach's Alpha, Correlation and Pearson –Brown for each field

No.	Field	Cronbach's Alpha	Correlation Coefficient	Pearson -Brown Correlation Coefficient
1	Commitment	0.830	0.807	0.893
2	Communication	0.846	0.673	0.808
3	Safety Rules and	0.600	0.497	0.664
4	Supportive Environment	0.763	0.607	0.758
5	Supervisory	0.904	0.855	0.923
6	Workers' Involvement	0.746	0.588	0.744
7	Personal Appreciation of	0.711	0.649	0.787
8	Appraisal of Physical	0.442	0.439	0.613
9	Work Pressure	0.685	0.572	0.728
10	Competence	0.813	0.718	0.838
11	Safety Climate	0.933	0.878	0.935

As illustrated in Table 3, Spearman correlation coefficient for each item and the total of each field (see Appendix A). The p-values (Sig.) are less than 0.05 for all fields, so the correlation coefficient of all safety climate dimensions are significant at $\alpha = 0.05$, so the questionnaire is consistent and valid to be measure what it was set for.

The relative importance index (RII), test value, P-value, and rank for each item in different safety climate fields is presented in Table 3. Site engineers responded positively towards aspects of Safety Climate including: commitment, communication, safety rules and procedures, supportive environment, workers environment, personal appreciation of risk, appraisal of physical work environmental work hazards, work pressure and competence. The percentage of approval of all safety climate components in this research study was 69.5% which is positive but not adequate in a serious field like safety that requires an outstanding and strict performance from everyone involved in construction projects.

SAFETY CLIMATE FOR SITE ENGINEERS

Table (3): Validity test, RII and Test Value for "Safety Climate"

Factor	Spearman Correlation Coefficient	P-Value (Sig.)	RII %	Test value	P-value	Rank
SC01	0.709	0.000*	71.0	4.05	<0.0001*	4
SC02	0.760	0.000*	72.6	4.49	<0.0001*	3
SC03	0.798	0.000*	79.2	5.91	<0.0001*	1
SC04	0.634	0.000*	77.2	6.01	<0.0001*	2
SC05	0.697	0.000*	69.7	4.37	<0.0001*	5
SC06	0.653	0.000*	58.0	-0.49	0.313	7
SC07	0.713	0.000*	67.2	2.51	0.006*	6
Commitment			**70.7**	**5.21**	**<0.0001***	
SC08	0.780	0.000*	70.6	4.00	<0.0001*	6
SC09	0.704	0.000*	75.1	5.38	<0.0001*	1
SC10	0.738	0.000*	71.2	4.47	<0.0001*	4
SC11	0.766	0.000*	71.2	4.67	<0.0001*	4
SC12	0.649	0.000*	71.4	4.40	<0.0001*	3
SC13	0.710	0.000*	73.9	5.03	<0.0001*	2
SC14	0.592	0.000*	66.0	2.45	0.007*	7
Communication			**71.3**	**5.94**	**<0.0001***	
SC15	0.575	0.000*	74.9	4.76	<0.0001*	1
SC16	0.663	0.000*	72.0	4.96	<0.0001*	2
SC17	0.274	0.010*	51.9	-3.03	0.001*	7
SC18	0.669	0.000*	66.9	3.14	0.001*	4
SC19	0.436	0.000*	64.9	4.47	0.001*	6
SC20	0.768	0.000*	68.9	3.25	0.001*	3
SC21	0.705	0.000*	63.9	1.79	0.037*	5
Safety Rules & Procedures			**66.2**	**3.97**	**<0.0001***	
SC22	0.311	0.004*	55.8	-1.17	0.122	7
SC23	0.753	0.000*	77.5	6.51	<0.0001*	6
SC24	0.701	0.000*	81.9	7.24	<0.0001*	2
SC25	0.617	0.000*	78.6	6.43	<0.0001*	5
SC26	0.749	0.000*	81.1	6.45	<0.0001*	3
SC27	0.637	0.000*	82.0	7.03	<0.0001*	1
SC28	0.681	0.000*	81.1	6.99	<0.0001*	3
Supportive Environment Environment			**76.9**	**7.12**	**<0.0001***	
SC29	0.811	0.000*	72.2	4.31	<0.0001*	6
SC30	0.857	0.000*	76.7	5.38	<0.0001*	1
SC31	0.864	0.000*	75.8	5.80	<0.0001*	3
SC32	0.806	0.000*	74.8	5.03	<0.0001*	4
SC33	0.680	0.000*	75.9	5.91	<0.0001*	2
SC34	0.750	0.000*	72.1	4.76	<0.0001*	7

SC35	0.694	0.000*	74.8	5.39	<0.0001*	4
Supervisory Environment			**74.6**	**5.70**	**<0.0001***	
SC36	0.637	0.000*	73.7	6.08	<0.0001	1
SC37	0.691	0.000*	72.9	5.03	<0.0001	2
SC38	0.692	0.000*	68.2	3.17	0.001*	6
SC39	0.682	0.000*	68.9	3.74	<0.0001	5
SC40	0.549	0.000*	70.7	5.05	<0.0001	3
SC41	0.359	0.001*	56.6	-1.36	0.087	7
SC42	0.678	0.000*	69.3	3.95	<0.0001	4
Workers' Involvemen			**68.9**	**4.97**	**<0.0001***	
SC43	0.330	0.003*	54.5	-1.62	0.052	7
SC44	0.716	0.000*	76.9	6.36	<0.0001*	4
SC45	0.730	0.000*	77.2	6.25	<0.0001*	2
SC46	0.707	0.000*	77.3	6.09	<0.0001*	1
SC47	0.754	0.000*	77.2	6.25	<0.0001*	2
SC48	0.668	0.000*	68.8	3.08	0.001*	6
SC49	0.599	0.000*	72.1	6.13	<0.0001*	5
Appreciation of Risk			**72.3**	**5.86**	**<0.0001***	
SC50	0.324	0.003*	74.0	4.68	<0.0001*	2
SC51	0.595	0.000*	50.7	-2.41	0.008*	6
SC52	0.475	0.000*	67.4	2.91	0.002*	5
SC53	0.679	0.000*	67.5	3.30	<0.0001*	4
SC54	0.245	0.018*	47.7	-3.18	0.001*	7
SC55	0.347	0.001*	75.3	4.76	<0.0001*	1
SC56	0.324	0.003*	69.2	4.14	<0.0001*	3
Appraisal of Physical Work Environment			**64.4**	**3.68**	**<0.0001***	
SC57	0.622	0.000*	58.0	-0.28	0.390	3
SC58	0.449	0.000*	55.1	-1.30	0.097	6
SC59	0.710	0.000*	48.5	-3.59	<0.0001*	7
SC60	0.594	0.000*	58.9	-0.14	0.446	2
SC61	0.729	0.000*	57.0	-0.58	0.280	4
SC62	0.491	0.000*	59.7	-0.56	0.288	1
SC63	0.594	0.000*	56.2	-0.167	0.368	5
Work Pressure			**56.2**	**-2.34**	**0.010***	
SC64	0.771	0.000*	65.9	1.92	0.027*	7
SC65	0.754	0.000*	69.6	4.22	<0.0001*	6
SC66	0.640	0.000*	72.9	5.21	<0.0001*	5
SC67	0.714	0.000*	75.8	6.28	<0.0001*	1
SC68	0.530	0.000*	75.6	6.67	<0.0001*	2
SC69	0.671	0.000*	73.2	5.32	<0.0001*	4
SC70	0.530	0.000*	75.3	6.32	<0.0001*	3
Competence			**72.7**	**6.18**	**<0.0001***	

Table (3) continued

C. Relationship between Personal Characteristics and Safety Climate

The personal characteristics included in this paper are a collective of demographic information, such as age, gender, marital status, education level, and other personal information considered in different safety studies such as work experience, job, direct employer, and safety training received. While there has been little research that holistically explores the relationship between these personal characteristics and safety climate, these characteristics may influence safety climate and consequently influence the individual safety behavior [26]. After analyzing the results of the questionnaires, marital status and training received were the only two demographic factors that have a positive influence on safety climate. In other words, married or trained site engineers have better safety awareness than others who did not receive any safety training or single. Other personal characteristics listed in table 1 have no impact on safety climate. This research showed different results with Siu et al. [28] regarding age.

V. CONCLUSIONS

This paper attempted to explore the relationship between personal characteristics and safety climate. It is found that site engineers have a positive perspective of safety climate, the results were coherent and promising, but more efforts should be done to raise shared responsibility for safety issues. The findings illustrated that site engineers who received safety training or married have more positive perception of the safety climate. In turn, age of site engineers, experience in construction, experience in the current company, field of work, employer, smoking habit, educational level, family members to support, job and career have no impact on safety climate. It is recommended to enhance site engineer's safety climate that may lead to better perception and behave more safely. However, it is recommended to raise safety awareness of site engineers through training programs and following safety rules and procedures.

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Appendix A:

	Safety Climate
Commitment Management ……	
SC01	Clearly considers safety to be equally as important as production,
SC02	Expresses concern if safety procedures are not adhered to,
SC03	Acts decisively when a safety concern is raised,
SC04	Acts quickly to correct safety problems,
SC05	Acts before accidents have occurred,
SC06	Praises site employees for working safely, and
SC07	Disciplines site employees for working unsafely.
Communication Management ……	
SC08	Clearly communicates safety issues to all levels within the organization,
SC09	Continues to bring safety information to site employees' attention,
SC10	Operates an open-door policy on safety issues,
SC11	Encourages feedback from site employees on safety issues,
SC12	Listens to and acts upon feedback from site employees,
SC13	Communicates lessons from accidents to improve safety performance, and
SC14	Undertakes campaigns to promote safe working practices.
Safety Rules and Procedures Current safety rules and procedures …	
SC15	Are made available to protect us from accidents,
SC16	Are adequate sources of information on safety,
SC17	Are so complicated that some workers do not pay much attention to them,
SC18	Should be consulted only by new recruits,
SC19	Require us to report any malpractice by a fellow worker,
SC20	Enforce the use of personal protective equipment whenever necessary, and
SC21	Require detailed work plans from subcontractors or self-employed individuals.
Supportive Environment As a group, we …	
SC22	Adopt a no-blame approach to highlight unsafe work behavior,
SC23	Often remind each other on how to work safely,

SAFETY CLIMATE FOR SITE ENGINEERS

	Safety Climate
SC24	Believe it is our business to maintain a safe workplace, environment
SC25	Always offer help when needed to perform the job safely,
SC26	Endeavor to ensure that individuals are not working by themselves under risky or hazardous conditions,
SC27	Maintain good working relationships, and
SC28	Ensure that the workload is reasonably balanced among ourselves.
Supervisory Environment My supervisor/safety manager …	
SC29	Has positive safety behavior,
SC30	Believes safety is very important,
SC31	Usually engages in regular safety talks,
SC32	Welcomes reporting safety hazards/incidents,
SC33	Is a good resource for solving safety problems,
SC34	Advocates working around safety procedures to meet important deadlines, and
SC35	Values my ideas about improving safety when significant changes to working practices are suggested.
Workers' Involvement Everyone …	
SC36	Aims to achieve high levels of safety performance,
SC37	Plays an active role in identifying site hazards,
SC38	Reports accidents, incidents, and potentially hazardous situations,
SC39	Participates in safety planning, according to our safety policy if being asked,
SC40	Has the responsibility to reflect on safety practice
SC41	Avoids being involved in accident investigations, and
SC42	Contributes to job safety analysis if being asked.
Personal Appreciation of Risk I …	
SC43	Am sure that it is only a matter of time before I am involved in an accident,
SC44	Am sure I can influence the level of safety performance,
SC45	Am clear about what my responsibilities are for safety,
SC46	Am aware that safety is the number one priority in my mind

	Safety Climate
	while working,
SC47	Believe some rules are really necessary to get the job done Safely,
SC48	Believe some rules and policies are not really practical, and
SC49	Cannot do the job safely without following every safety procedure.
Appraisal of Physical Work Environment and Work Hazards In our work environment …	
SC50	Safety is a primary consideration when determining site layout,
SC51	Poor site layout planning is an accepted feature of the industry,
SC52	The chances of being involved in a site accident are quite large,
SC53	Operating site conditions may hinder one's ability to work safely,
SC54	Detecting potential hazards is a major aim of the site planning exercise,
SC55	Working with defective equipment is not allowed under any circumstances, and
SC56	Potential risks and consequences are identified prior to execution.
Work Pressure Under pressure …	
SC57	I work under a great deal of tension,
SC58	I am not given enough time to get the job done safely,
SC59	It is necessary for me to depart from safety requirements for production's sake,
SC60	I perceive operational targets in conflict with some safety measures,
SC61	It is normal for me to take shortcuts at the expense of safety,
SC62	I tolerate minor unsafe behaviors performed by coworkers, and
SC63	It is not acceptable to delay periodic inspection of plant and equipment.
Competence I …	
SC64	Received adequate training to perform my job safely,
SC65	Am aware, through training, of relevant safety procedures,
SC66	Do fully understand current, relevant legislation,
SC67	Am skilled at avoiding the dangers of workplace hazards,
SC68	Am capable of identifying potentially hazardous situations
SC79	Am proactive in removing workplace safety hazards, and
SC70	Am capable of using relevant protective equipment.