



Are Attitudes Towards People with Disability Preventing Positive Change in the UAE Workforce?

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Abstract: Although the United Arab Emirates (UAE) is celebrated for its remarkable levels of heterogeneity, disability integration remains a relatively recent endeavour. Various measures are being implemented to enhance inclusivity in the workplace, including national initiatives and policies. However, despite progressive changes, actual integration seems limited. While fostering inclusion in the workplace and cultivating attitudes that support the integration of people with disabilities (PWD) bring notable benefits, such as fostering an inclusive work culture that increases profitability, attracts diverse customers, and creates opportunities for PWD to enhance social capital, income, and quality of life, prevailing attitudes continue to pose challenges. Hence, this study analysed the attitudes of 150 participants in the workforce, representing diverse cultural backgrounds and industries across the UAE. The findings revealed influential antecedents shaping these attitudes. Univariate analysis of variance identified the number of contact hours and correlational analyses unveiled significant associations between attitudes towards disabled persons and the type of disability, particularly psychological disabilities. A conceptual model of antecedents specific to the region is proposed, aiming to bolster workplace developments in the UAE. Further, the exploration of how positive psychology research could potentially transform relevant attitudes towards PWD is examined as one approach to facilitating workplace inclusion.

على الرغم من أن دولة الإمارات العربية المتحدة (الإمارات) تحتفي بمستوى ملحوظ من التنوع، إلا أن دمج ذوي الإعاقة لا يزال مسعى حديثاً نسبياً. فقد تُطبق تدابير مختلفة لتعزيز هذا الدمج في مكان العمل من مبادرات وسياسات وطنية، لكن وبرغم التغييرات التقدمية يبدو التكامل الفعلي محدوداً. وبينما يُسفر عن تعزيز دمج الأشخاص ذوي الإعاقة في مكان العمل وتنمية اتجاهات داعمة فوائد ملحوظة، مثل تعزيز ثقافة عمل شاملة تزيد الربحية وتجذب عملاء متنوعين وتخلق فرصاً لذوي الإعاقة لتحسين رأس المال الاجتماعي والدخل وجودة الحياة، إلا أن الاتجاهات العامة لا تزال تحمل كثيراً من التحديات. لذا حُللت هذه الدراسة اتجاهات ١٥٠ مشاركاً من سوق العمل يمثلون خلفيات ثقافية متنوعة ومجالات مختلفة في أنحاء الإمارات. وأظهرت النتائج وجود عوامل مؤثرة في تشكيل مثل هذه الاتجاهات العامة حيث كشف تحليل التباين أحادي المتغير عدد ساعات الاتصال، وكشفت التحليل الارتباطية علاقات دالة بين الاتجاهات نحو الأشخاص ذوي الإعاقة ونوع الإعاقة بما فيها النفسية. وعليه يُقترح نموذج مفاهيمي خاص بالمنطقة يهدف إلى تعزيز تطورات مكان العمل في الإمارات. بالإضافة إلى ذلك، تُدرس كيفية مساهمة بحوث علم النفس الإيجابي في تحويل اتجاهات دمج الأشخاص ذوي الإعاقة ليكون منهجاً واحداً يتمحور حول تيسير الدمج في مكان العمل.

Keywords: attitudinal antecedents, disability, discrimination, organizational diversity, inclusivity, positive psychology

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The perceptions of people with disability (PWD) within the workplace has garnered significant attention in recent years within positive psychology research (Martz & Livneh, 2016; Ottoboni et al., 2017; Whitt et al., 2014), focusing increasingly on promoting optimal functioning for individuals with disabilities in professional environments, despite the discrimination and stigmatization they face (Wehmeyer & Shogren, 2014). Adverse attitudes constitute a major hurdle experienced by PWD (Krahn, 2011). Disability, defined as "an impairment limiting a major life activity while allowing for gainful employment" (Stone & Colella, 1996, pg. 352), is a recognized form of diversity in the workforce (Shore et al., 2011). Yet, it tends to be undervalued relative to other forms of diversity (Tapp & Raymont, 2016). Undesirable attitudes toward diversity significantly impede inclusion, whereby PWD encounter substantial equality challenges in recruitment, workplace experiences, career advancements, and facing career plateaus (Dispenza, 2001; Stone & Colella, 1996).

Although a substantial body of literature on PWD exists globally, research addressing PWD in the workplace in the United Arab Emirates (UAE) is scarce. Despite steps taken by the UAE to reduce inequalities and enhance workplace inclusivity, with an increased focus on employee wellbeing (Lambert et al., 2020), the Federal Law 29 of 2006 being the first in the UAE to safeguard the rights of individuals with 'special needs,' which includes fundamental rights of UAE nationals with disabilities, a lack of inclusion persists. This raises the question: Despite the presence of these laws, why is there a deficiency in implementing diversity and inclusion within regional organizations?

Rao and Donaldson (2015) revealed an underrepresentation of minority group participants in positive psychology research, with limited investigations in non-Western contexts. Yet, adopting a positive psychology perspective elucidates how diversity enhances individual and collective wellbeing, as well as community and organizational growth. Existing positive psychology literature (Warren et al., 2019; Wehmeyer & Shogren, 2014) documents the advantages of diversity and disability inclusion in the workforce, promoting positive attitudes, improving organizational culture (Hartnett et al., 2011; Whitt et al., 2014), fostering psychological safety (Vogus & Taylor, 2018), tapping into unused talent (Kulkarni et al., 2018), and fostering consumer loyalty (Gonzalez & Fernandez, 2016). Globally, the push for a diverse workforce is gaining momentum as scholars and managers recognize its organizational benefits (Alserhan et al., 2009; Kendall & Karns, 2018), such as cultivation of performance, attraction of diverse talent, and mirroring the customer base (McCuiuston et al., 2004). Thus, it is advantageous for employers to regard disability as a respected type of diversity rather than an obligatory quota.

Theories in positive psychology provide avenues to surmount these barriers, fostering positive behavioural and attitudinal changes, as well as achieving individual and organizational goals. A strengths-focused approach that focuses on exploring, identifying, valuing, and leveraging the strengths of PWD has the potential to shift internalized biases as well as the attitudes of colleagues and supervisors in the workplace (Warren et al., 2021). Cultivating the support of able-bodied



individuals as allies and partners in collectively combating biases against PWD has the potential to bring about system-wide change (c.f. Lau et al., 2023; Warren, 2023; Warren et al., forthcoming). Importantly, these approaches hold promise because cultivating strengths focus and allyship are not only effective but also trainable through organizational programs (Warren et al., 2022). This study explores the relationship between attitudes toward disability and potential antecedents affecting the inclusion of PWD in the UAE workplace. It also provides insights for practitioners and researchers on overcoming barriers related to disabilities within the regional workplace, drawing on positive psychology research, theory, and best practices.

Attitudes towards Persons with Disabilities (PWD)

Attitudes hold affective, cognitive and behavioural components (Gawronski, 2007), which direct how individuals feel, think and act towards an object, person or concept (Vilchinsky et al., 2010). The way disability is construed, particularly in the workplace, is a critical facilitator in the formation of positive and negative attitudes (Cox & Hill, 2018; Martz & Livneh, 2016). Historically, factors such as societal attitudes towards PWD were centred on the individual's impairment and viewed as a personal tragedy; but more recently, disability is viewed as a socially constructed phenomenon, that is, how the physical environment imposes limitations on this category of people (Oliver, 2013), effectively shifting from a medical to a social model of disability (Olkin, 2000) and with implications for the workforce.

While workforce diversity includes assorted variances including age, gender, race, religion, and disability, the latter is often overlooked due to attitudes that individuals hold toward this group (Wentling & Palma-Rivas, 2000). Misconceptions held by employers involve individual factors, such as PWD lacking necessary skills (Heera & Devi, 2016) and exhibiting inappropriate social behaviours, management factors, such as adverse impacts on co-workers and amplified legal requirements (Burke et al., 2013), and cost factors linked to greater absenteeism and extensive accommodations (Kaye et al., 2011).

In recent years, there have been efforts to enhance PWD integration into the workforce, ranging from the United Nations 'Rights of Persons with Disabilities Protocol' (WHO, 2011), to policy implementations and a shift to a social model of disability. Research has highlighted the range and degree of obstacles that PWD are subject to, such as high rates of unemployment (Helgeson et al., 2018), discrimination (Graham et al., 2018), a lack of reasonable accommodations and lower income levels (Palmer, 2011; Temple et al., 2018). The International Classification of Functioning, Disability and Health (ICF) identify negative attitudes as the second most disabling barrier for PWD in terms of feeling included in the workplace (WHO, 2011).

Research has also identified the benefits of integrating PWD into the workforce, such as improvements in profitability, acquiring diverse customers and an inclusive work culture with greater disability awareness (Lindsay et al., 2018), not to mention higher levels of social capital, income and overall improvements to quality of life for PWD themselves. Research in positive psychology suggests that individuals who are exposed to those with disabilities become more tolerant of others, self-aware, display higher levels of emotional intelligence and tend to focus intently on self-actualisation (Martz & Livneh, 2016). Martz and Livneh (2016) found that constructs such as hope, optimism, resilience, benefit-finding, meaning-making and posttraumatic growth are associated with



greater adaptive outcomes of disability acceptance. Such findings make compelling cases to prioritize attitudinal changes when managing disability and focusing on generating desirable benefits from this diverse group, as well as creating a more tolerant and positive society (Goering, 2015).

Disability and The United Arab Emirates (UAE)

Compared to other countries in the Middle East, the UAE stands out for its high levels of diversity stemming from an open, welcoming approach to globalization and a commitment to cultivating an increasingly diverse workforce (Alserhan et al., 2009). While inclusion holds significant value among UAE leaders and policymakers, evidenced by the implementation of the UAE Disability Act (Federal Law No. 29/2006), disability integration remains a recent development and is less widespread (Anati, 2012). Nonetheless, considerable efforts are being made to enhance disability inclusivity. Initiatives like 'MyCommunity,' launched in 2013, aimed to transform Dubai into a disability-friendly city. National policies introduced in 2017 shifted the perception of disability from a medical to a social construct (Olkin, 2000) and formally introduced the term 'People of Determination'. Notably, in 2018, the country implemented the WHO 'Model of Disability Survey' to gather information on PWD, representing a significant improvement from previous data collection methods, such as census records from 2016, which identified 15,782 individuals in the UAE with disabilities, 62% of whom were UAE nationals.

Despite these strides, little research focuses on PWD in the UAE workforce. Local research mainly concentrates on PWD in education, primarily focusing on the integration of children with disabilities into mainstream schools (Anati, 2012; Gaad, 2019). While the emphasis on youth represents a proactive approach to change, school staff consistently report feeling unprepared due to insufficient support (Anati, 2012). Such findings align with those in other Arab countries, where despite encouragement for inclusion, a lack of training and knowledge impede integration.

Research on maternal perceptions of children with developmental disabilities has also revealed significant findings. Crabtree's (2007) study unveiled a trend among Muslim parents in the UAE to perceive disability as a 'Punishment from God.' Similar perceptions are present in other cultures; for instance, in India, disability is often viewed as predetermined by 'God's Will.' Likewise, in Afghan society, empowering a PWD is considered selfish (Turmusani, 2001). Cultural factors, shaped by variables such as tradition, ethnicity, and religion, significantly influence attitudes, defining what is deemed 'normal' versus 'disability' (Wong & Hernandez, 2018).

While the transition from a medical to a social perspective regarding perceptions of PWD is positive, this model may pose limitations on certain cultures relative to others. Societal constraints often impose greater handicaps than the condition itself (Gilliard et al., 2005). The WHO (2011) suggests that disability should not be viewed at either extreme and encourages a balanced approach. The ICF advocates for perceiving disability as a dynamic interaction between health conditions and contextual factors, acknowledging disability not only as an individual attribute but inviting research into attitudes and social progress. Hence, we propose five hypotheses to drive inquiry into this area.

The Present Study: Our Hypotheses

McKay et al. (2015) outlines the significance of contact when overcoming stereotypical associations utilizing Allport's (1967) contact theory, affirming that contact can have a positive impact



on the perceptions of PWD. Allport's theory states that meaningful and collaborative contact can alter predetermined beliefs. Antonak (1981) subsequently found intensity of contact as the most persuasive factor. The contact hypothesis linked to disability includes similar inferences, as Li and Wu (2017) noted that individuals' self-esteem and attitudes towards individuals with intellectual disabilities were improved through a pre-service training program relative to a control group.

Similarly, Phillips et al. (2018) speculated that positive social perceptions were found amongst participants who had more frequent interactions with individuals with intellectual disabilities. Pettigrew's (1998) intergroup contact theory further posits four mechanisms alleged to derive from direct contact; 1) learning about the perceived out-group, 2) behaviour driven attitude changes, 3) in-group reappraisal and 4) generating affective ties, the latter emphasized as the most effective in reducing prejudice (Schmid et al., 2013). Although Keith et al. (2015) advocate that amount of contact is not influential enough to shape positive attitudes as greater contact in some situations was related to higher levels of explicit prejudice towards PWD.

While research may differ on the benefits derived from contact (Árnadóttir et al., 2018), Lindau et al. (2017) found 'brief digital interventions' effective in catalysing positive effects on attitudes and reducing social distance regarding intellectual disability. While Hean and Dickinson (2005) contest that a significant factor is whether the training is voluntary or involuntary, Kulkarni et al. (2018) note that individuals having prior experience with PWD were more willing to take part in disability training workshops, but those voluntarily disposed to take part in the workshops may require sensitization the least. Studies in positive psychology highlight the importance of implementing proactive interventions in the workplace related to increasing contact, making reasonable adjustments and normalising interactions with PWD (Whitt et al., 2014). Accordingly, we propose three hypotheses.

H1: There is a positive relationship between the attitudes toward PWD within the UAE and the inclusion of PWD into the workplace

H2: Positive attitudes towards disabled people (ATDP) are positively associated with greater amount of contact

H3: Positive attitudes towards disabled people (ATDP) are positively associated with a more positive attitude towards PWD training

Lack of knowledge has been identified as an aspect in the formation of negative attitudes towards PWD in the workforce. McDonnall and Crudden (2018) stressed this in the case of employers' attitudes towards blind or visually impaired employees. Variables that significantly affected employers' attitudes included their knowledge on how work tasks can be accomplished, belief in their own personal knowledge and whether they hired an employee in the past with a disability. Indeed, Phillips et al. (2018) showed that positive social perceptions of individuals with intellectual disabilities were linked to greater knowledge in the domain. Further, cultural beliefs framing disability as a result of God's will may ignite disability phobias preventing a desire to develop knowledge on PWD. Societal pressures and expectations may lead to what Robinson and Goodey (2017) coin an inclusion phobia; this fear of the unknown may be a facilitator in the manifestation of negative attitudes. Thus, we also investigate the following hypothesis.



H4: Negative attitudes toward PWD are positively associated with perceived lack of knowledge

Individuals with differing disabilities encounter a range of frequencies and types of discrimination and stigmatization (Graham et al., 2018). Greater negative attitudes have been attributed to individuals with psychological symptoms rather than somatic symptoms and findings show these attitudes stem from initial selection processes in the workplace (Dispenza et al., 2017), where individuals with physical related disabilities are more positively rated than those with cognitive disabilities. Similarly, ratings evaluating a mock candidate were substantially lower when the candidate disclosed having cognitive disabilities (Dalgin & Bellini, 2008). For PWD in the workforce, dehumanization is a common occurrence (Cage et al., 2017). A failure to consider challenges that neuro-diverse individuals may face such as working in noisy settings and following verbal directions (Morris et al., 2015) can cause work to be challenging. These biases may explain why individuals with psychiatric disabilities struggle to enter and be successful in the workforce (Malachowski & Kirsch, 2013). Thus, our final hypothesis includes the following.

H5: Negative attitudes toward PWD are associated with persons that have psychological symptoms rather than somatic symptoms

Method

Participants

A total of 150 participants took part in this study, all of whom were working professionals in the UAE. There were no inclusion requirements and participants ranged in gender, nationality, professional level and industry sector (see Table 1).

Procedure

Following ethics approval and questionnaire formulation, a pilot study was conducted. From this, the length of the questionnaire proved to be a concern, specifically applied to the Attitude Towards Disabled Person (ATDP) measure. Thus, the original questionnaire was adapted from 20 questions to 14, ensuring it still addressed the research question and aligned with its original intent. The questionnaire was then published live on Qualtrics and a link was distributed. By utilizing a stratified sampling technique, the link was emailed to organizations in the UAE, with assistance from LinkedIn and the researcher's professional network. Once the questionnaire was accessed, participants agreed to confidentiality, informed consent and right to withdraw statements. Participants were given a personal participant code formed by their initials and the last three digits of their phone number to complete the measures.

Measures

Repertory Grid Analysis (RGA). The RGA was administered to gauge attitudes towards type of disability. Constructs were adapted from Bieri (1966) original 10 x 10 grid test and Spengler and Strohmers (1994) 4 x 6 version and elements were produced by the primary researcher to allow for quantitative analysis. This technique, grounded in Kelly's (1955) Theory of Personal Constructs,



assumes that individuals are like scientists, developing internal models of reality called constructs to understand the world around them. Constructs are often perceived as polar opposites; this dichotomy is utilized on the Repertory grid using a Likert scale of 1-5 when rating elements. The elements and constructs were provided to participants to allow for quantitative results to be derived. The four elements included; Person in a wheelchair, Person with depression, Person with autism, and Non-Disabled Person. The six constructs consisted of; Outgoing-Shy, Adjusted-Maladjusted, Decisive-Indecisive, Calm-Excitable, Interested in others-Self Absorbed, and Cheerful-Ill-Humored (adapted from Bieri, 1966). Participants rated each element according to the construct they believed best aligned with their views. Lower scores indicated more positive attitudes and higher scores indicated greater negative attitudes.

Table 1

Descriptive statistics for demographic variables of sample (n=150)

<i>Variables</i>		<i>Frequency (n)</i>	<i>Percentage (%)</i>
Gender	Male	54	36.0
	Female	96	64.0
Employment	Employer	17	11.3
	Employee	133	88.7
Nationality	Emirati	48	32.0
	Non-Emirati	102	68.0
Industry	Accountancy, Banking, Finance	19	12.6
	Business, Consulting, Management	2	1.3
	Creative Arts and Design	1	0.6
	Education	13	8.6
	Energy and Utilities	6	4.0
	Engineering and Manufacturing	10	6.6
	Healthcare	6	4.0
	Hospitality, Events Management	1	0.6
	Information Technology	19	12.6
	Law	1	0.6
	Leisure, Sport and Tourism	10	6.6
	Media and Internet	9	6.0
	Property and Construction	7	4.6
	Public Services, Administration	12	8.0
	Recruitment and HR	2	1.3
	Retail	19	12.6
Science and Pharmaceuticals	7	4.6	
Other	6	4.0	

Attitude Towards Disabled Persons (ATDP) Questionnaire. The ATDP was adapted from Yuker and Hurley's (1987) original Form O and has been used to measure attitudes towards PWD



in general (Findler et al., 2007). The ATDP is considered the most widely used and tested scale (Brown & Jeffress, 2018), with an overall reliability yielding Cronbach alpha reliability co-efficient of 0.80 and greater. The form includes 14 questions and was answered on a 6-point Likert scale, where answers ranged from -3 (I disagree very much) to +3, (I agree very much). The questionnaire was scored by changing the signs of the positively worded items in questions 2, 5, 6, 11 and 12 on Form O. All responses were then added algebraically, the sign of the algebraic resultant was then changed and a constant of 60 added to determine the final ATDP score (Yuker & Hurley, 1987).

Demographic Questionnaire. This questionnaire included items such as gender, professional level and industry. Subsequently, it was used to develop information on participants' perceived knowledge and amount of contact with PWD as well as willingness to take part in disability training in line with the previously outlined antecedents.

Design and Statistical Analyses

Data gathered on Qualtrics was exported to the Statistical Package for the Social Sciences (SPSS) software, where all analyses were performed. Descriptive statistics were analyzed to check for means and standard deviation. For independent variables, inclusion, contact, perceived knowledge and attitudes towards training, the data was considered nominal, therefore a Univariate Analysis of Variance was employed to test for differences with ATDP scores as the dependant variable. Prior to reporting, Levene's test was used to assess the equality of variances, as $p > 0.05$, equal variances were assumed. As hours of contact was found to be significant ($p < 0.05$), Tukey HSD was utilized as a post hoc test to determine where the significance lies. To test for correlation of type of disability and constructs with ATDP scores, both were considered continuous data and the Pearson's correlation co-efficient was employed. Cronbach Alpha coefficients signified a good internal consistency and were all 0.7 or higher (Cronbach, 1951).

Results

A univariate analysis of variance was conducted to determine the significance of inclusion in the workplace, hours of contact, attitude towards training and perceived lack of knowledge with ATDP scores. As Levene's test was $p > 0.05$, equal variances can be assumed. When significance was found, post-hoc comparisons using the Tukey HSD test were utilized to determine where the significance lies. Means and standard deviation are presented in Table 2.

Hypothesis 1 stated there is a positive relationship between the attitudes towards PWD within the UAE and the inclusion of PWD in the workplace. A Univariate Analysis of Variance was conducted to compare whether working with a PWD had an effect on attitude scores, as measured by the ATDP Questionnaire. A non-significant effect was found between level of inclusion in the workplace and attitude scores [$F(1,71)=0.289, p=.593$]. Therefore, support for hypothesis 1 was not found.

**Table 2**

Means and Standard deviations for independent variables (n=150)

Variable	Response	Mean	Std
V2 - Do you work with an employee that has a disability?	Yes	71.97	1.55
	No	69.05	2.17
V3 - How many hours monthly on average do you spend with people with disabilities?	1-2 hours	62.93	2.52
	3-5 hours	70.58	2.96
	6-8 hours	74.63	3.39
	8-10 hours	73.7	2.54
	11+ hours	73.6	2.75
V4 - Do you believe you lack knowledge of people with disabilities?	Yes	69.67	1.66
	No	71.45	1.92
V5 - Do you think disability training would benefit you in the workplace?	Yes	70.66	1.25
	No	70.62	1.16

Hypothesis 2 stated that positive ATDP scores are positively associated with greater amount of contact. Average monthly hours of contact and attitude scores as measured by the ATDP Questionnaire were analyzed by utilizing a univariate analysis of variance. A significant effect was found between hours of contact and attitude scores, $[F(4,71) = 2.94, p = 0.026]$. Post hoc comparisons using the Tukey HSD test indicated that the mean score for 1-2 hours ($M = 62.93, SD = 2.52$) was significantly lower than 3-5 hours ($M = 70.58, SD = 2.96$), 6-8 hours ($M = 74.64, SD = 3.39$), 8-10 hours ($M = 73.71, SD = 2.54$) and 11 or more hours ($M = 73.61, SD = 2.75$). These findings provide support for hypothesis 2. Figure 1 and Table 3 show that number of hours progressively seems to improve attitudes towards PWD up to 6-8 hours and then levels off.

Hypothesis 3 stated that positive ATDP scores are positively associated with more positive attitudes towards disability training. A univariate analysis of variance was conducted to compare whether participants believed disability training would be beneficial to them in the workplace and attitude scores as measured by the ATDP Questionnaire. There was a non-significant effect found between attitudes towards pursuing training and ATDP attitude scores $[F(1,71) = 0.56, p = 0.813]$. Therefore, support for hypothesis 3 was not found.



Figure 1

Comparison of ATDP scores across average hours of contact monthly

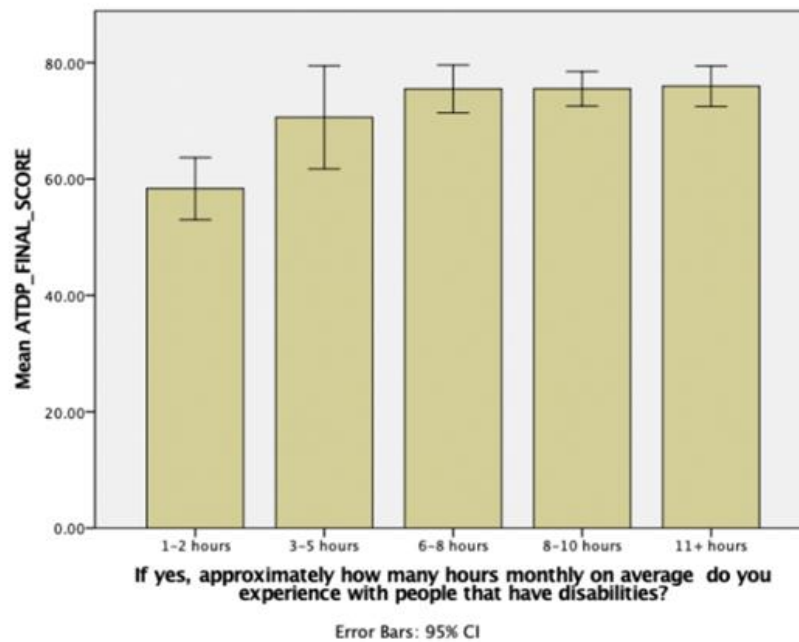


Table 3

Means and standard deviations for average hours of contact

Average hours of contact	Mean	Std
1-2 hours	62.93	2.52
3-5 hours	70.58	2.96
6-8 hours	74.63	3.39
8-10 hours	73.70	2.54
11+ hours	73.61	2.75

Hypothesis 4 stated that negative attitudes towards PWD are positively associated with perceived lack of knowledge. Responses on whether participants believed they lacked knowledge of PWD and ATDP attitude scores, were tested by univariate analysis of variance. There was a non-significant effect found between perceived knowledge and attitude scores [$F(1,71) = 0.290, p = 0.592$], thus, support for hypothesis 4 was not found.

Finally, hypothesis 5 affirmed negative attitudes toward PWD are associated with persons that have psychological symptoms rather than somatic symptoms. Means, standard deviations and Pearson's correlations were applied to analyze the data. All the Cronbach Alpha coefficients indicated a good internal consistency as they were 0.7 or higher (Cronbach, 1951). Table 4 shows that on the repertory grid, where lower scores represent greater positive attitudes, Element 3 - person



with Autism and Element 2, person with Depression were scored higher, representing greater negative attitudes. Element 1 - person in a wheelchair and element 4 - Non-Disabled person were scored lower, representing greater positive attitudes.

Table 4

Means and standard deviations for elements

Element	Mean	Std
1. Person in wheelchair	14.43	5.31
2. Person with depression	21.51	4.30
3. Person with autism	18.88	5.63
4. Non-Disabled Person	14.19	3.80

The relationship between type of disability and attitudes was investigated using Pearson's Correlation coefficient. For Element 1, person in a wheelchair ($M=14.43$, $SD=5.31$), a moderate negative correlation was found, $r = -.47$, $n=150$, $p < .001$. For Element 2, person with depression ($M=21.51$, $SD= 4.30$), a moderate negative correlation was found, $r = -.49$, $n=150$, $p < 0.01$. For Element 3, person with autism ($M=18.88$, $SD=5.63$), a strong negative correlation was found $r = -.58$, $n=150$, $p < .001$. Lastly, for non-disabled ($M=14.19$, $SD=3.80$), a weak positive correlation was found, $r = .27$, $n=150$, $p < .001$. These findings provide support for hypothesis 5 (Table 5).

Table 5

Correlations among elements

	1	2	3	4	5
1. ATDP Scores	-				
2. Wheelchair	-.47**	-			
3. Depression	-.49**	.46**	-		
4. Autism	-.58**	.48**	.61**	-	
5. Non-Disabled	.27**	.16	-.56	-.11	1

Note $n=150$ ** $p < .001$

Further analysis (Table 6) showed that within each element, constructs that revealed the strongest significant correlations were 'Cheerful-Ill-Humored' for Element 1, $r = -.06$, $n=150$, $p < 0.01$ and for Element 4, $r = .26$, $n=150$, $p < 0.01$. Further, Element 2 portrayed 'Outgoing - Shy' as the strongest, $r = -.52$, $n=150$, $p < 0.01$ and 'Decisive-Indecisive' for Element 3, $r = -.55$, $n=150$, $p < 0.01$.

Overall, the study findings showed support for hypotheses 2 and 5, showing a significant association between positive ATDP scores and increased contact with PWD; and negative ATDP scores and psychological symptoms of disability, rather than somatic symptoms. No significant findings were found for the remaining hypotheses associating attitudes towards PWD with inclusion in the workplace of PWD, attitudes towards disability training, and perceived levels of knowledge.



Table 6

Correlations among constructs

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
ATDP	-																									
E1																										
C1	.39**	-																								
C2	.42**	.59**	-																							
C3	.46**	.87**	.62**	-																						
C4	-.01	.26**	.33**	.23**	-																					
C5	.39**	.74**	.58**	.75**	.32**	-																				
C6	.47**	.77**	.65**	.75**	.33**	.74**	-																			
E2																										
C1	.52**	.41**	.41**	.42**	.10	.36**	.34**	-																		
C2	.34**	.18**	.38**	.23**	.15	.28**	.22**	.58**	-																	
C3	.51**	.35**	.46**	.38**	.18*	.39**	.38**	.67**	.55**	-																
C4	.30**	-.12	-.15	-.19*	.05	-.13	-.21*	-.18*	.22**	-.10	-															
C5	.49**	.48**	.33**	.48**	.19*	.43**	.43**	.63**	.54**	.67**	-.12	-														
C6	.47**	.37**	.29**	.38**	.12	.33**	.31**	.62**	.60**	.66**	.24**	.73**	-													
E3																										
C1	.47**	.46**	.28**	.38**	.13*	.46**	.43**	.46**	.26**	.51**	.07	.54**	.43**	-												
C2	-.48	.25**	.38**	.22**	.14	.27**	.31**	.33**	.42**	.40**	-.07	.46**	.44**	.54**	-											
C3	-.55	.42**	.36**	.42**	.14	.37**	.32**	.50**	.38**	.46**	-.19*	.56**	.52**	.54**	.57**	-										
C4	.01	.07	.15	.07	-.01	.02	.32	.14	.08	.10	-.01	.07	.15	-.15	-.02	.19*	-									
C5	.48**	.43**	.27**	.36**	.17*	.40**	.44**	.41**	.24**	.40**	-.05	.49**	.43**	.67**	.54**	.62**	.10	-								
C6	.52**	.31**	.22**	.27**	.16*	.33**	.35**	.43**	.24**	.47**	-.02	.46**	.41**	.70**	.56**	.57**	.01	.77**	-							
E4																										
C1	.25**	.01	0.9	.01	.19*	.14	.04	-.16	-.16	-.10	.16*	-.06	-.20*	-.09	-.19*	-.13	.03	-.10	-.09	-						
C2	.19**	.20*	.16	.16	.19*	.23**	.15	0.3	-.10	.01	.22**	.14	-.01	.08	-.09	-.03	.03	.08	-.04	.66**	-					
C3	.24**	.24**	.13	.25**	.10	.19*	.12	0.2	-.10	-.11	.03	0.9	-.02	.01	-.17*	.04	.03	.02	-.10	.62**	.57**	-				
C4	0.7	.19*	.17*	.14	.11	.12	.11	.11	.08	.02	-.08	.13	.09	.10	-.03	.04	.03	.18*	.12	.20*	.31**	.46**	-			
C5	.22**	-.10	-.01	-.05	.06	.00	-.08	-.09	-.05	-.18*	-.01	-.15	-.13	.25**	.28**	.23**	.13	.22**	.33**	.44**	.23**	.43**	.45**	-		
C6	.26**	.04	.04	.05	.13	.02	.01	-.09	-.14	-.21*	.02	-.05	-.11	-.12	-.19*	-.08	.13	-.07	-.13	.53**	.36**	.57**	.46**	.70**	-	



Note: E = Element. E1 = Person in a wheelchair. E2= Person with Depression. E3= Person with Autism. E4= Non-Disabled Person
C= Constructs. C1= Outgoing-Shy. C2= Adjusted- Maladjusted. C3= Decisive-Indecisive. C4= Calm-Excitable. C5= Interested in
Others-Self Absorbed. C6= Cheerful-Ill-Humored.

Note: ** p <0.1., *** p<.001.

Discussion

Our study found that duration of contact and type of disability influence attitudes within the UAE workforce. Consistent with research (e.g., Phillips et al., 2018), an increase in the average hours of monthly contact was linked to a more positive attitude toward PWD, aligning with Allport's (1967) initial contact hypothesis. Further analysis regarding the type of disability revealed that psychological disabilities received more negative perceptions supporting our initial hypothesis. This finding, in line with research (e.g., Cage et al., 2017), showed that individuals perceived 'Person with Autism' most negatively, followed by 'Person with Depression.' A divergence emerged in rating physical disabilities, with participants assigning more positive ratings to a person in a wheelchair, akin to those given to a non-disabled person. Confirming earlier findings, we found associations between ATDP scores (Attitudes Toward Disabled Persons) and attitudes toward non-disabled individuals and those using wheelchairs (Graham et al., 2018). Those who rated non-disabled individuals more positively tended to have lower scores for attitudes toward PWDs. Conversely, individuals who rated people in wheelchairs more positively had higher scores.

Regarding specific personality traits associated with attitude scores, the constructs 'cheerful - ill-humored' were highly linked to both 'person in a wheelchair' and 'non-disabled' individuals, while 'outgoing-shy' correlated with 'person with depression,' and 'decisive-indecisive' with 'person with autism.' However, the lack of significant effects found for inclusion, perceived knowledge, and attitudes towards training on attitudes toward PWDs might be attributed to the relatively recent implementation of laws and policies supporting the integration of PWD into the UAE workforce. It may be premature for these measures to have an impact. Nevertheless, our findings provide an essential baseline for understanding the current attitudes of the UAE workforce and will serve as a valuable benchmark for evaluating future progressions.

From the analysis, a new conceptual framework has been derived, emphasising the most prominent antecedents (Figure 2). The findings are in line with Allport's (1967) contact theory, suggesting that personal contact with members of a stereotyped group generally improves attitudes towards its members. However, the current study highlights that although contact is effective there seems to be an optimum number of hours that produce positive results. Participants' attitudes gradually increased from 1-2 hours up to 6-8 hours and then remained consistent, suggesting there is a potential ideal number of hours before contact no longer derives greater results. Nevertheless, McManus et al. (2010) found that contact was beneficial when increasing knowledge of disabilities, yet its quality (over time alone) predicted more positive attitudes. A strengths-based approach to understanding disability through contact and awareness has also been found to be effective within organizations (Buntinx, 2013).

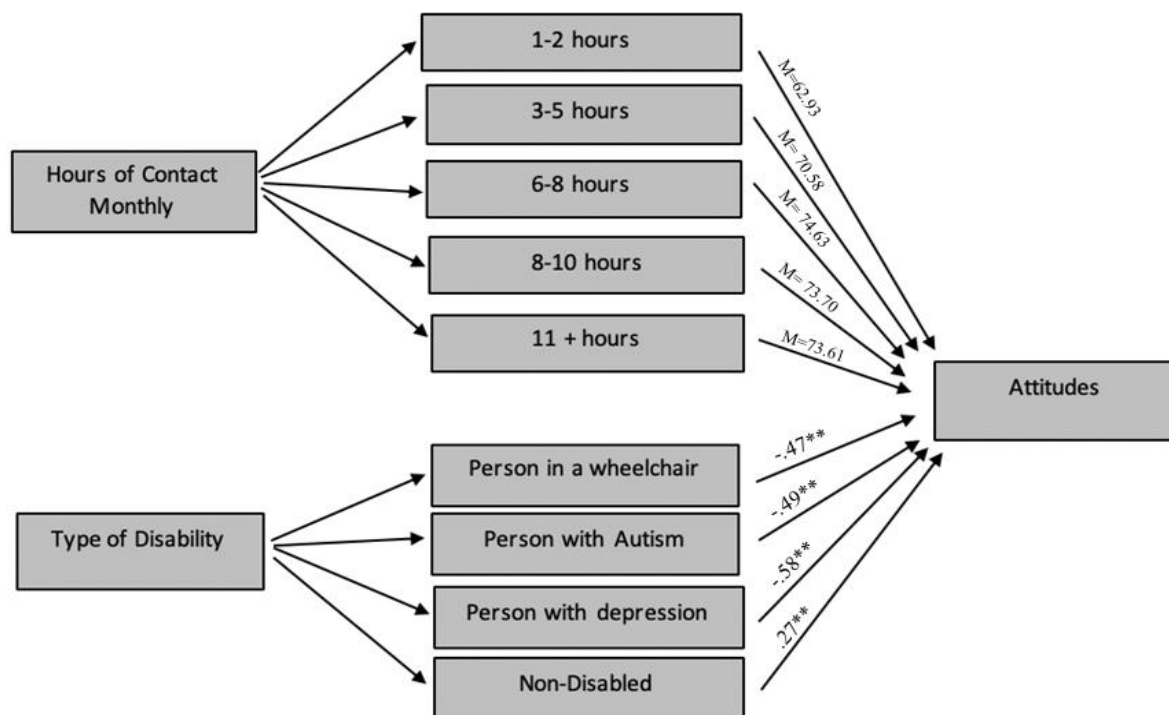
The conceptual framework generated also posits that type of disability is an antecedent to the formation of attitudes towards PWD in the UAE workforce. In line with current research, greater negative attitudes are associated with individuals with psychological disabilities rather than physical disabilities (Fevre et al., 2013). Utilizing a RGA (Kelly, 1955) to test for associations between type of



disability and ATDP scores offered a novel approach while avoiding unidimensionality of results towards disability in general. By gaining insight into participant ratings, the study revealed that within psychological disabilities, autism spectrum disorder yielded the greatest negative results, followed by depression, similar to Cage et al.'s (2017) findings. The 'decisive-indecisive' spectrum had the greatest association with attitude scores, emphasising in the context of the UAE workforce, decision making as a factor affecting the formation of attitudes towards individuals with autism.

Figure 2

Revised conceptual model of antecedents of attitudes towards PWD



Subsequently, there were similarities in rating a physically disabled element, 'Person in a wheelchair' and a 'Non-Disabled Person'. Due to greater perceived similarities, such as intellectual level or cognitive functioning, it is possible that less cognitive effort is required when learning about the perceived out-group and generating affective ties, which Pettigrew's (1988) intergroup contact theory suggests reduces prejudice. Deal (2003) contended that the social model of disability is evolving into its second phase, whereby groups are no longer focusing specifically on group commonality but finding diversity within the group.

Practical Implications

This study prompts practical implications for improving the integration of PWD in the workplace, whilst also narrowing the gap between PWD and employees without disabilities in the



UAE. The development of the conceptual model and its validation through the findings in the current study together with other positive psychology models can guide organisations in the UAE to understand important antecedents and interventions related to attitudes toward disability formation, specific to the region.

The transformation of attitudes toward individuals with disabilities holds substantial importance in cultivating positive organisational behaviour and fostering inclusive workplace cultures, especially in Middle East region workplaces, which have traditionally been less inclusive. Our findings support the research of Shore and Chung (2022) who emphasise the role of positive attitudes in shaping organisational policies and practices conducive to supporting employees with disabilities. Attitude shifts toward inclusivity, as identified by Shore et al. (2009), are integral to creating a supportive work environment, fostering trust, and promoting respect among colleagues. Our study also underscores positive psychology research (Haynes & Rudolph, 2020) showing that positive attitudes influence organisational leaders to champion diversity and inclusion, resulting in improved employee satisfaction and commitment. Finally, our study supports previous research (Babik & Gardner, 2021) which emphasises that fostering positive attitudes toward disability within organisational settings positively correlates with enhanced teamwork, innovation, and problem-solving, ultimately contributing to greater organisational effectiveness and competitiveness.

Limitations and Future Directions

While this study contributes valuable insights, it is important to acknowledge its limitations. First, in alignment with personal construct psychology principles (Kelly, 1955; 1977), attitudes are subject to continuous hypothesizing, testing, and potential acceptance or rejection. A cross-sectional design, as employed here, may not fully capture the dynamic nature of attitudes. Future investigations could consider longitudinal designs to reveal deeper causal associations, tracking changes in attitudes over time among a cohort of participants. Further, the use of self-reported subjective attitudes might not entirely reflect actual behavioural interactions with PWD, possibly influenced by social desirability biases. Notably, while the study revealed significant findings regarding average hours of monthly contact, it remains necessary to establish if an optimal number of hours exists that could potentially lower attitude scores. Lastly, the hourly measures employed might not comprehensively gauge the extent of monthly contact.

As substantiated in existing literature, negative attitudes pose significant barriers for PWD to access the fundamental conditions necessary for realizing their full potential. These attitudes fortify barriers hindering workforce participation (Lu et al., 2017). Subsequent research in UAE workforces should delve deeper into this issue, integrating insights from positive psychology, which links disability attitudes to fostering inclusive and positive diversity climates (Warren et al., 2019). Collecting data from both employees with and without disabilities would offer richer understanding in this domain. Despite ongoing efforts to integrate and support PWD in the UAE, this study reaffirms low contact levels and the impact of psychological disabilities as drivers of negative attitudes toward disability in the workforce.

Consequently, while there is support for inclusion, its implementation faces challenges (Kaye et al., 2011). Organizations in the UAE can leverage this information to gain insights into the origins of negative attitudes and thereby develop effective policies and organizational practices to counter



discrimination and promote inclusion. By emphasizing the benefits of positive attitudes towards disability in organizations, there is also potential to enhance the wellbeing and optimal functioning of PWD themselves (Wehmeyer & Shogren, 2014; Whitt et al., 2014).

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