



The Mediating Role of Conscientiousness in the Relationship between Self-Determination and Rights Awareness among Saudi Students with Disability

الدور الوسيط لسمّة الضمير الحي في العلاقة بين تقرير المصير والوعي بالحقوق لدى الطلاب السعوديين من ذوي الإعاقة

By

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Doi: 10.21608/jasht.2025.463063

استلام البحث: ٢٠٢٥/٨/١٥

قبول النشر: ٢٠٢٥/١٠/٢

Al-Muqati, Dalal Mofareh (2025).The Mediating Role of Conscientiousness in the Relationship between Self-Determination and Rights Awareness among Saudi Students with Disability, *Arab Journal of Disability and Gifted Sciences*, The Arab Institute for Education, Sciences, and Arts, Egypt, 9(36), 124 – 148.

<http://jasht.journals.ekb.eg>

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Abstract:

This study aimed to examine the relationship between self-determination and rights awareness, while testing the mediating role of conscientiousness among Saudi students with disability. A total of 184 students with disability (mean age = 23.71; SD = 4.85; 65% females) participated in the study. They completed the People with Disability Awareness Scale, the revised Self-Determination Scale for students, the short form of the Big Five Inventory, in addition to a demographic data form. The findings indicated that self-determination indicators were positively related to rights awareness among persons with disability. In addition, conscientiousness was a full mediator role in these relationships, with conscientiousness in the model, the direct relationships were no longer significant. The study concludes that fostering self-determination and enhancing conscientiousness can contribute to increasing rights awareness among people with disability. In light of these findings, the study recommends that services and programs aiming to promote rights awareness among people with disability should take into account their personality traits, with a particular focus on strengthening self-determination and conscientiousness, as these factors may help them realize their rights and achieve a better quality of life.

Keywords: self-determination, conscientiousness, rights awareness, students with disability, Saudi Arabia.

المستخلص:

هدفت هذه الدراسة إلى فحص العلاقة بين تقرير المصير والوعي بالحقوق، مع التحقق من الدور الوسيط لسمّة الضمير الحي لدى الطلاب السعوديين من ذوي الإعاقة. شارك في البحث (١٨٤) طالبًا وطالبة من ذوي الإعاقة (متوسط العمر = ٢٣.٧١؛ الانحراف المعياري = ٤.٨٥؛ ٦٥٪ منهم إناث)، حيث استكملوا مقياس وعي الأشخاص ذوي الإعاقة، ومقياس تقرير المصير المعدّل للطلاب، والنسخة

المختصرة من قائمة العوامل الخمسة الكبرى للشخصية، بالإضافة إلى استمارة بيانات ديموغرافية. وقد أظهرت النتائج أن تقرير المصير يرتبط إيجابيًا بالوعي بالحقوق، كما أن الضمير الحي يلعب دور الوسيط الكامل في هذه العلاقة، إذ تختفي الدلالة الإحصائية للعلاقات المباشرة عند إدخاله في النموذج. وتخلص الدراسة إلى أن تعزيز تقرير المصير وتنمية سمة الضمير الحي قد يسهمان في رفع مستوى الوعي بالحقوق لدى الأشخاص ذوي الإعاقة. وفي ضوء هذه النتائج، أوصت الدراسة بضرورة أن تراعي الخدمات والبرامج الموجهة لتعزيز وعي الحقوق لدى الأشخاص ذوي الإعاقة خصائصهم الشخصية، مع التركيز على تنمية تقرير المصير وتعزيز الضمير الحي، لما لذلك من أثر في مساعدتهم على التمتع بحقوقهم وتحقيق جودة حياة أفضل.

الكلمات المفتاحية: تقرير المصير؛ سمة الضمير الحي؛ الوعي بالحقوق؛ الطلاب ذوو الإعاقة؛ المملكة العربية السعودية.

Introduction

It is estimated that around one billion people are disabled in one way or another worldwide (WHO/World Bank, 2011). The World Health Survey designedt a study in 59 countries concluded that the prevalence of disability in people in the age of 18 and older was 15.6%, ranging from 11.8% in developed countries to 18% in developing countries (World Health Organization, 2004). In Saudi Arabia, the prevalence of persons living with disability was estimated to be around 3.73%, while others have reported a prevalence of 0.8%, depending on the definition of disability used (Al-Jadid, 2013). It has been argued that in order for persons with disability to enjoy better lives, they have to exercise fully their rights (Bannerman et al., 1990).

A big step in the rights of people with disabilities was achieved when the UN Convention on the Rights of Persons with Disabilities (CRPD) was voted by the UN General Assembly in 2006 (Mukhopadhyay & Moswela, 2020). The CRPD provided a range of general human rights that people who are disabled in any way have to enjoy, including principals not to be discriminated, being respected for their dignity, and to be able to participate and be fully in society.

In the time after UNCRPD were adopted as a human right in 2006, a range of studies examined how the rights of persons with disability were achieved. In a systematic review that examined the realization of the rights of people with disability in Rwanda, Njelesani and colleagues (2018) concluded that although there were some achievements made, there were still some forms of discrimination and they recommended more awareness of the persons with disability's rights. Investigated the adherence to the UNCRPD in Czech psychiatric hospitals, Winkler and colleagues (2020) found that none of the rights of UNCRPD was fully implemented in those hospitals. Research has also investigated how people with disability realize their rights and concluded that some persons with disability may not know fully their rights (Jahanzaib et al., 2020). This was also reported in Bannerman et al. (1990) who advocated for more rights awareness among people with disability. It is therefore of great importance to investigate factors that can contribute to the rights awareness among persons with disability.

People with disability are encouraged to take actions and take control over their lives, and government disability supports insist on providing services where people with disability would be at the center of the action (Curryer et al., 2015). After the publication of the UNCRPD, many countries are have attempted to rectify it in order to make people with disability participate in actions to change their lives (Curryer et al., 2015). For example, the National Disability Insurance Scheme (NDIS) of Australia put forward an individualized, person-centered planning to fulfill the choices and needs of people with disability (Disability Care Australia, 2013). The Australian department of social services recognizes also the rights of disabled people to make decisions about their own lives and to have determinacy over their own choices and quality of life (Australian Government Department of Social Services, 2013).

Self-determination theory:

Making own decisions and own choices is an important part of self-determination (Wehmeyer, 2014). Therefore, we argue that self-determination theory might help predict rights awareness among people with disability. Wehmeyer (2003) defined self-determination as the fact of the ultimate determiner of one's own life, being able to make decisions and choices concerning one's life, free from other people's influences and interference. Self-determination consists of being self-aware, being psychologically empowered, being self-regulated, and being autonomous (Chao, 2021). Basic human rights are reflected in the components of self-determination and people are encouraged by society to assume these rights when reaching adulthood (Abery et al., 1995). Consistent to the self-determination theory, people with disability have the right to live fully their lives and achieve their goals (Vicente et al., 2020). Further, people with disability have claimed their will for improved self-determination (Ward, 1996). Those skills outlined in the self-determination theory, including goal attainment, problem solving, choice making can serve people with disability in many ways to improve their lives (Burke et al., 2018). The special education for individuals with disability have provided evidence that self-determination results in positive outcomes for people with disability (Wehmeyer, 2004). In a study conducted in 80 students with disabilities, it was concluded that those individuals who had increased scores of self-determination had more preferences for moving in an apartment outside of family home, getting a bank account, and getting a salary (Wehmeyer & Schwartz, 1997). It was also argued that instructions on self-determination increased participation in community activities (Sowers & Powers, 1995). Consistent with this evidence, self-determination in people with disability would be associated with willingness to know one's own rights. our claim is that, when

persons with disability are self-determined, they seek to know about and enjoy all the rights that are granted to them.

Mediation role of Conscientiousness

Another important construct for rights awareness and self-determination among persons with disability is conscientiousness. Conscientiousness involves self-discipline, thoroughness, organization, and persistence (Benedict et al., 2005). It has been argued that conscientiousness is a relevant trait that is beneficial in neuropsychiatric disease prognosis (Fuchs et al., 2020). Previous research claimed that conscientiousness was related to a decrease in cognitive decline rates (Fuchs et al., 2019). It was also argued that low levels of conscientiousness presented a risk factor for mortality and disability (Jokela et al., 2019). Previous research has shown also that low conscientiousness was associated with frailty (Stephan et al., 2017), a range of disabling illnesses, including cardiovascular illnesses (Jokela, Pulkki-Råback, et al., 2014), type 2 diabetes (Jokela, Elovainio, et al., 2014), and obesity (Jokela et al., 2013). Others argued that conscientiousness was associated with a range of positive outcomes including reduced odds of diabetes, Alzheimer and Parkinson's diseases (Bogg & Roberts, 2013). Low conscientiousness has also been found to be an independent predictor of disability retirement (Nielsen et al., 2021). All this evidence points out the role that conscientiousness plays in maintaining people healthy, especially people with disabling diseases. Many studies were carried out on the awareness of the rights of people with disability in the general population, but few examined how people with disability are aware of their rights. Further, there is little empirical research linking self-determination and rights awareness among people with disability in the Kingdom of Saudi Arabia. This study was aimed to use self-determination theory to predict rights awareness in people with disability, and to

examine the mediating role of conscientiousness personality trait among Saudi students with disability.

Methods

Data and participants

The sample used in this study was constituted of people with disability that were approached via universities. This sample was determined using snowball sampling methods. Researchers approached the universities with formal letters and university officials provided a preliminary list of students with disability. These students helped on their turn to find other students with disability. Face-to-face interviews were used for data collection, and for respondents with auditory disability, a sign language expert was recruited. Before data collection stage, respondents were informed about the intent and outcome of the study and they gave their informed consent. A total number of 184 respondents with disability participated in this study. The mean age for this sample was 23.71 (SD = 4.85, range = 18-42). Around 65% of the participants were females, there were 93.5% of single respondents, 5.4% of married participants, and 1.1% of divorced individuals. About 20.1% had auditory disability, 46.7% had visual impairment, 1.1% had learning disability, 25.5% had mobility disability, 3.3% had multiple disabilities, and 3.3% had chronic diseases. There was around 8.7% of simple disability in the sample, 45.7% of moderate disability among the respondents, 27.7% of severe disability, and 17.9% of very severe level of disability in the sample. Around 4.3% had fathers with no formal education, 26.6% were participants whose fathers had less than high school education, 29.9% whose fathers had high school education, 32.6% whose fathers had a university degree, and 6.6% whose fathers had a master's degree. About 18.5% had mothers with no formal education, 25.5% were participants whose mothers had less than high school education, 25% whose mothers had high school education, 27.7% whose mothers had a university degree, and 3.3% whose mothers had a

master's degree. Around 32% had a monthly income below 5000 SR, 31.5% had a monthly income between 5000 and 10000 SR, 15.8% had a monthly income between 10000 and 15000 SR, and 20.7% had a monthly income of more than 15000 SR.

Measures

The questionnaire used included the People with Disability Rights Awareness Scale (Alioat, 2023), the Self-determination Scale for student revised (Chao, 2021), and the Big Five Inventory, the brief version (Rammstedt & John, 2007).

1- *The People with Disability Rights Awareness Scale was developed by Alioat(2023):*

The scale is a 17-item measure whose purpose is to evaluate in people with disability their awareness of their rights. This scale is scored on a 5-point Likert scale that ranges between 1 (strongly disagree) and 5 (strongly agree). This scale demonstrated good psychometric properties in the development study. In this study, the scale showed a good internal consistency reliability (Cronbach's $\alpha = 0.98$).

2- *The Self-determination Scale for student revised (Chao, 2021):*

This scale is a 40-item scale whose purpose is to evaluate self-functioning among college students. respondents are allowed to score the questions on a range of 5-point Likert scale. The scale consists of 4 sub-measures: self-awareness, psychological empowerment, autonomous functioning, and self-regulation. A subscale about being self-aware that consists of 7 items (item 1 to 7), another one about being psychologically empowered consisting of 9 items (item 8 to 16), another one about being self-regulated consisting of 12 items (item 17 to 28), and the autonomous functioning that consist of 12 items (item 29 to 40). This scale had exhibited good psychometric properties (Chao, 2021). This study showed good reliability coefficients for all the subscales: Cronbach's α was 0.88 for self-awareness, 0.91

for psychological empowerment, 0.92 for self-regulation, and 0.89 for autonomous functioning.

3- *The Big Five Inventory, short version (Rammstedt & John, 2007):*

This is a brief scale that consists of 10 items. Respondents are allowed to score the questions on a range of five-point Likert scale from 1 to 5. The score 1 indicate strongly disagree and 5 strongly agree. The scale consists of 5 subscales, including conscientiousness. Each dimension consists of 2 items. This scale exhibited good psychometric properties (Rammstedt & John, 2007). In this study, only conscientiousness personality trait will be used. The reliability coefficient for conscientiousness was good (Cronbach's $\alpha = 0.86$).

Data analysis

The statistical analysis was carried out in RStudio (Rstudio Team, 2022). In the first phase, we conducted descriptive statistics and correlation coefficients. The 'psych' package (Revelle, 2017) was used to compute correlations and the Cronbach's α coefficients. In the second phase, structural equation modelling was carried out using the 'lavaan' package (Rosseel, 2012). This path was represented graphically with 'lavaanPlot' package (Lishinski, 2020). The model was assessed using various fit indices. This included chi-square, SRMR, RMSEA, TLI, and CFI (Hu & Bentler, 1999).

Results

The summary of the descriptive statistics and the correlation coefficients is displayed in Table 1. The mean score for people with disability rights awareness was 74.5 (SD = 13.30, range = 17-85), the mean score for self-awareness was 30.38 (SD = 5.48, range = 7-35), the average score for psychological empowerment was 39.91 (SD = 7.08, range = 9-45), the average score for self-regulation was 51.04 (SD = 8.95, range = 12-60), the average score for autonomous functioning

was 47.27 (SD = 10.14, range = 12-60), and the average score for conscientiousness was 7.91 (SD = 1.80, range = 2-10).

Tables 1. Descriptive statistics and correlation coefficients

Variable	Mean (SD)	1	2	3	4	5	6
1. Rights awareness	74.5 (13.30)	1					
2. Self-awareness	30.38 (5.48)	0.52***	1				
3. Psychological empowerment	39.91 (7.08)	0.56***	0.90***	1			
4. Self-regulation	51.04 (8.95)	0.64***	0.81***	0.85***	1		
5. Autonomous functioning	47.27 (10.14)	0.41***	0.57***	0.64***	0.72***	1	
6. Conscientiousness	7.91 (1.80)	0.20***	0.45***	0.52***	0.43***	0.31***	1

Notes: *** $p < 0.001$

There were positive correlations between People with disability rights awareness and self-awareness ($r = 0.52$, $p < 0.001$), and psychological empowerment ($r = 0.56$, $p < 0.001$), People with disability rights awareness and self-regulation ($r = 0.64$, $p < 0.001$), People with disability rights awareness and autonomous functioning ($r = 0.41$, $p < 0.001$), and People with disability rights awareness and conscientiousness ($r = 0.20$, $p < 0.001$). There were also positive correlations between conscientiousness and self-awareness ($r = 0.45$, $p < 0.001$), conscientiousness and psychological empowerment ($r = 0.52$, $p < 0.001$), conscientiousness and self-regulation ($r = 0.43$, $p < 0.001$), and conscientiousness and autonomous functioning ($r = 0.31$, $p < 0.001$).

Table 2. Direct relationships between self-determination, conscientiousness, and rights awareness

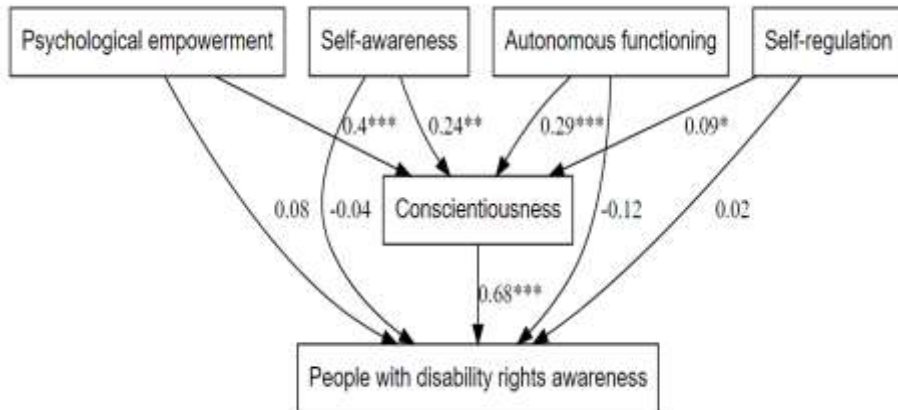
Variable	β	SE	t	p
Intercept	29.04	1.34	6.05	<0.001
Self-awareness	0.32	0.12	0.24	<0.01
Psychological empowerment	0.41	0.09	0.34	<0.001
Self-regulation	0.39	0.15	0.22	<0.001
Autonomous functioning	0.29	0.18	0.13	<0.01
Conscientiousness	0.58	0.08	0.23	<0.001

Notes: β = standardized beta coefficients, SE = standard errors

The summary of the linear regression analysis predicting rights awareness is summarized in Table 2. The results indicated significant direct relationships between self-determination dimensions and rights awareness. Self-awareness was positively related to rights awareness ($\beta = 0.32, p < 0.01$), psychological empowerment was positively associated with rights awareness ($\beta = 0.41, p < 0.001$), self-regulation was positively related to rights awareness ($\beta = 0.39, p < 0.001$), autonomous functioning was positively related to rights awareness ($\beta = 0.29, p < 0.01$), and conscientiousness was also positively related with rights awareness ($\beta = 0.58, p < 0.001$).

In the mediation analysis, a path analysis was estimated from self-determination to rights awareness through conscientiousness. This model is plotted in Figure 1. This model showed acceptable model fit ($\chi^2 = 265.32, p < 0.001$; RMSEA = 0.07; SRMR = 0.04; CFI = 0.92; TLI = 0.96). In this model however, direct relationships between self-determination dimensions and rights awareness were no longer significant. As shown in Figure 1, self-determination dimensions were related to rights awareness through conscientiousness personality trait. Self-awareness predicted rights awareness through conscientiousness ($\beta_{\text{ind}} = 0.16, p < 0.001$), psychological empowerment predicted rights awareness through conscientiousness ($\beta_{\text{ind}} = 0.27, p < 0.001$), self-regulation predicted rights awareness through conscientiousness ($\beta_{\text{ind}} = 0.06, p < 0.05$), and similarly autonomous functioning was also related to rights awareness through conscientiousness ($\beta_{\text{ind}} = 0.19, p < 0.01$).

Figure1. Mediation analysis predicting rights awareness through conscientiousness personality trait



Notes: * $p<0.05$, ** $p<0.01$, *** $p<0.001$

Discussion

The rights of people with disability are increasingly getting recognized around the world after the publication of UNCRPD. However, some studies claimed that some persons with disability may not know fully their rights. And yet, many countries rectified the CRPD to be person-centered, allowing individuals with disability to get involved in actions that change their lives, to have control over their choices and preferences. This research was therefore aimed to use self-determination theory to study the association between self-determination and rights awareness, and the mediation role of conscientiousness. The main findings revealed that the self-determination dimensions were positively associated with rights awareness in people with disability. In the model with conscientiousness as a mediator, the direct relationships were no longer significant,

showing that conscientiousness was a path through which self-determination operated.

The self-determination dimensions: being self-aware, being psychologically empowered, being self-regulated, and being autonomous exhibited positive relationships with rights awareness. This is in line with previous research (Chou et al., 2017; Russo, 2019; Wehmeyer et al., 2011). This corroborates the findings that self-determination provides positive benefits in people with disability. For example, research suggested that autonomous functioning and psychological empowerment were key factors in college enrollment and academic achievement among students with disability (Petcu et al., 2017). Previous studies have established causal evidence. An randomized trial control group study was conducted by Wehmeyer et al. (2013) to investigate the impact of self-determination on students with disability over a period of 3 years. They found that those students with disability in the intervention group exhibited greater improvements than the students with disability in the control group. A study designed as a follow-up 2 years after the students of Wehmeyer et al. (2013) examined adult outcomes of the students with disability including employment, life satisfaction, financial autonomy and autonomous living (Shogren et al., 2015). Those students with disability who were self-determined showed greater scores on these dimensions.

It was claimed that even though self-determination is relevant for all individuals, it is more crucial for persons with disability (Ward, 1994). This is because disabled individuals often fail to take control of their lives (Abery et al., 1995). Among the cited reasons for individuals with disability to fail have full control of their lives, one can mention the fact that

parents tend to overprotect them (Haigh et al., 2013), support that is not adequate for actual needs (Shogren & Broussard, 2011), and the constant need to prove one's own abilities (Jahoda & Markova, 2004). Consequently, self-determination has been introduced to be the best practice in special education for students with disability (Chou et al., 2017). An intervention study investigated the impact of a TAKE CHARGE, a self-determination intervention on students with disability who were receiving special education (Powers et al., 2001). A meta-analysis of interventions to enhance self-determination in students with disabilities concluded that the interventions were effective in promoting students with disabilities (Burke et al., 2018). Recent studies suggested also that self-determination increased autonomy and volitional action and contributed to the quality of life of people with disabilities (Wehmeyer, 2020). A systematic review study concluded that interventions to increase self-determination in youth with disabilities were also effective in improving the life of young people with disability (Lindsay & Varahra, 2022). A randomized controlled trial study concluded that interventions to enhance self-determination were also successful in increasing the well-being of people with disability (Wong, 2022). Conscientiousness personality trait played a role as a path through which self-determination benefited disabled students . This might be due to the fact that people with high conscientiousness are prone to being self-disciplined, dutiful, and orderly, whereas people with low levels of conscientiousness may tend to be disorganized, careless, and not reliable (John et al., 2008). It has also been argued that conscientious people have the ability to make long-term plans and to remain adhered

to them (Martin et al., 2007). Similarly, people who score high on conscientiousness are reported to display healthy behaviors (Bruce et al., 2010). Others have claimed that conscientious individuals have high odds of searching important information relevant to their health (Hill & Roberts, 2011). In line with this, conscientious people with disability would be more likely to search for information about their rights, including rights to health.

This study has limitations that have to be acknowledged. Firstly, this study employed as cross-sectional design, and consequently, we cannot draw any causality or direction in the relationships. Future research is recommended to rely on longitudinal designs. Secondly, this study relied on snowball sampling methods, and this is not ideal for generalizability of the findings. Random sampling methods are recommended in future research. Third, this study used self-reported measures, which may be subject to social desirability.

Conclusion

This study found that self-determination was positively associated with rights awareness in a sample of college students with disability. It was also found that conscientiousness was a positive mediator in this relationship. Self-determination was a predictor of rights awareness only through conscientiousness. It seems that conscientiousness personality trait is an important factor for people with disability to realize their rights. It is crucial that services and programs to promote rights awareness in people with disability take into account their personality traits. Specifically, growing self-determination in people with disability and enhancing their conscientiousness could benefit them and

allow them enjoy their rights and consequently, enjoy a better life.

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