

EVALUATING THE SELF-ESTEEM AND SELF-EFFICACY OF PATIENTS WITH NEW PROSTHETIC DENTURES IN TWO TEACHING HOSPITALS IN LAGOS, NIGERIA

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Abstract

Several studies have suggested that self-esteem and self-efficacy may be included as self-management techniques after an illness. However, none has studied these variables among dental patients with new prosthetic dentures. This study, therefore, assessed the level of self-esteem and self-efficacy of dental patients and the relationship between these two variables among the Nigerian dental population. The study was conducted at the outpatient prosthetic units of the Departments of Restorative Dentistry of two teaching hospitals in Lagos. Consented patients (N=43) were presented with validated self-esteem (4-item) and self-efficacy for denture rehabilitation

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(12-item) measures. Descriptive and inferential statistical outputs were set at $p < 0.05$ level of significance. Respondents expressed low negative self-esteem with a mean value of 7.33 ($SD = 2.4$). However, the self-efficacy level suggests a high value with ($\bar{x} = 40.6$; $SD = 6.13$). A significant negative correlation between self-esteem and self-efficacy ($r = -.367^$) was obtained. Low self-esteem may not translate to low self-efficacy. Early assessment and monitoring of these variables in dental clinic patients are advised to enable timely intervention through education and therapy.*

Keywords: Self-esteem, Self-efficacy, Prosthetics, Dentures, Teaching hospitals

INTRODUCTION

Self-efficacy may be defined as the ability to act on one's belief to enable tasks and challenges previously thought to be difficult to be overcome and accomplished (Ahmad & Safaria, 2013). Hence, individuals with high self-efficacy are likely to approach difficult life situations with optimism and a sense of a 'can do' attitude. Self-esteem expresses the value and self-worth individuals place on themselves. Self-esteem represents the need for respect from others and one's self-respect. Hence, self-esteem may predict self-efficacy in health settings. Harorani, Safarabadil, Jadidil, Seavey, Masmouei & Bazrafshan (2018) suggested that self-esteem and self-efficacy may be included as self-management techniques after an illness. However, a gap exists in identifying the level of self-esteem and self-efficacy in dental patients that have just received new dentures. Additionally, the relationship between self-esteem and self-efficacy of dental patients in Nigeria is yet to be investigated. These gaps are what this study attempted to fill.

Self-esteem and self-efficacy are sometimes misconstrued to mean the same thing, but there are differences (Lane, Lane and Kyprianou, 2004). Self-esteem reflects people's global self-worth of their capabilities (Bandura, 1997), while self-efficacy describes the belief in a person's ability to carry out tasks. Studies on the relationship between these vari-

ables in dental settings are hard to come by. A near similar study with stroke patients examined self-efficacy with positive and negative effects (Maujean & Davis, 2013). In their study, positive effect was related to increased reports of self-efficacy and vice versa. Positive affect connotes positive feelings that promote successful interaction with people and the environment in which they operate. Mandava (2021) reported a weak correlation between self-esteem and oral health quality of life after orthodontic treatment. However, for Harorani et al. (2018), a significant relationship was obtained between self-efficacy and self-esteem ($r = .816$, $p < 0.05$). The inconsistent findings require confirmation in medical settings due to contextual errors that may arise if an assumption is made between the two variables.

Dental transplants or tooth removal of patients can be painful and can initiate anxiety feelings (Maggirias & Locker, 2002). Prior knowledge of these discomforts may in turn negatively influence the level of self-esteem and self-efficacy of dental patients. A reduction in the level of self-esteem and, hence, self-efficacy due to dental treatment procedure may have a long-term debilitating effect on the rehabilitation of patients with tooth loss.

Maggiore, Johnston and Rossier (2018) reported a positive association between self-esteem and self-efficacy, while Mandava et al. (2021) & Kragt, Wolvius, Jaddoe, Tiemeier, & Ongkosuwito (2018) expressed weak relationships. People with positive affectivity exude confidence and optimism when they relate with their supervisors at work (Hui, 2007). These characteristics are closely related to high self-esteem. Significant relationships were obtained in the study carried out by Hermann (2005). Korpershoek et al. (2011) documented successfully that the construct of self-efficacy successfully enhanced treatment outcomes. Additionally, self-efficacy predicted positive treatment outcomes for long-term disease (Hoffman, 2013), prediction of treatment dropout (Keshen, et al. 2017) and with the rate of hospitalization of cancer patients (Kenzik et al. 2016). Self-efficacy assessment has been utilized to determine the successful communication between health workers and patients (Wei-T, 2013) and the ability of individuals to perform their routine health examinations and main-

tenance of healthy behaviour (Rimal, & Real, 2005). Self-efficacy promotes healthy behaviour because people with high self-efficacy are likely to view challenging situations and tasks as those that can be overcome (Maibach & Murphy 1995).

Self-esteem assesses the global evaluation of our self-worth and capabilities. Bandura, (1977) posited that “self-liking does not necessarily beget performance attainment”, while Hayloo (2014) believed that self-esteem does not predict self-efficacy. Thus, there are no conclusive findings on the link between the two variables, especially with patients’ rehabilitation from dental treatments. This study aimed to advance knowledge on these arguments from the perspective of Nigerian dental patients. Therefore, we present the objectives of this study. Firstly, we identified the level of self-esteem and denture self-efficacy in dental patients that had just received new dentures. The second objective of this study was to investigate if the self-esteem and denture self-efficacy of dental patients that had just received a new denture would be positively associated. The study’s hypotheses, therefore, stated that patients that have just received a new denture replacement will report a low self-esteem and denture self-efficacy. Secondly, it is stated that there will be a significant positive relationship between the self-esteem and denture self-efficacy of patients who have just received a new denture replacement.

Methods

A survey research design, with purposive and convenient sampling methods, was adopted for data collection. This is because complete edentulous patients are less seen compared with partially edentulous cases. The total participants were 43 patients; 15 patients were from the Lagos University Teaching Hospital (LUTH), while 28 patients were from Lagos State University Teaching Hospital (LASUTH) both located in the city of Lagos. Data were collected from patients who were receiving routine treatment after prosthetic devices were fitted on them at the outpatient prosthetic units of the two teaching hospitals.

Two psychological scales measured the two variables of interest in this study. The first instrument was the denture self-efficacy rehabilitation mea-

sure adapted from the Self-Efficacy for Rehabilitation Outcome Scale developed by Waldrop et al. (2001) with a reliability value of 0.94. The items on the Self-Efficacy for Rehabilitation Outcome Scale were reworded to measure the belief in the participant's ability to maintain their new dentures and follow-up treatment instructions. One of the items is "during my rehabilitation, I believe I can do therapy that requires me to smile". The items were scored on a response format of 1 to 4, ranging from strongly disagree to strongly agree. The reliability value for the locally adapted version of the scale is 0.841.

The second measuring instrument was a Nigerian validated version of the self-esteem scale (Oladipo & Malomo, 2014) that was adapted from Rosenberg (1965). The validated scale is a uni-dimensional self-esteem scale with 4 items, and Cronbach's alpha of .63. One of the items is "I feel I do not have much to be proud of". The negative items were reverse-scored during the analysis. The items were scored on a Likert's response format of 1 to 4; strongly disagree to strongly agree.

For participating patients who could not understand the English language, a back-to-back translated version of each of the measures was carried out by two proficient translators and presented for that purpose. In this case, only three of the Yoruba-speaking participants could not understand the English language; and thus needed the items to be translated to the Yoruba language. Ethical approval was obtained from the Lagos University Teaching Hospital's ethical committee. The participants were assured of the confidentiality of their identities and responses. Additionally, informed consent was obtained from all participants at the point of data collection.

The study data were analyzed with inferential statistics, frequency of responses, and correlation matrix. All of these were adopted to test the hypotheses at the 0.05 level of significance.

3. Results

Table 1: Demographic Characteristics of Respondents (N=43)

Table 2: Pattern of Responses to Self-Esteem

Table 3: Pattern of Responses to Denture Self-efficacy Rehabilitation

Table 4: Correlation Matrix on self-esteem and denture self-efficacy

Discussion

This study investigated self-esteem and self-efficacy in dental patients with tooth loss. The results in Table 2 suggest that the inclination to feel that they are failures was strongly agreed by more than half (51.2%) of the respondents, while 39.5% agreed to the statement. Therefore, these results suggest that respondents reported low self-esteem. This may be due to the total tooth loss ((Nasiriziba, Saati & Haghara et al., 2020) suffered by the patients and the challenges of adapting to the new situation of using prosthesis. Another plausible reason may be the influence of other variables, such as their income status, the poor economy and other personal challenges. Further results in table 2 reveal low self-esteem (13.5%) of the total variance in the prediction of the denture self-efficacy rehabilitation of participants. Similar results in Ozdemiroglu, et al., (2017) and Kim, et al. (2012) were obtained in medical settings with cancer patients where it was suggested that the pain associated with cancer treatment resulted in low self-esteem. Because low self-esteem has previously been reported to cause psychopathology (Johan, Tine, Hanne, & Michel, 2017), it is pertinent to monitor the self-esteem of patients whose treatment is characterized by pain or discomfort.

Huff et al. (2006) also reported that 53% of oral health patients demonstrated low self-esteem. Also, fluctuations in self-esteem were reported in patients with satisfaction and appearance of their dentures (Dumitrescu, Zetu, & Teslaru, 2012). What our results suggest is that medical practitioners attending to dental patients need to evaluate the self-esteem levels of patients in the clinic periodically, starting from their first medical visit. This will inform the need or not for intervention that will aid treatment and rehabilitation. Oancea Timar, Papava, Christina, Ilie, & Dehelean (2020) also suggested that personality traits of neuroticism may also be checked to avoid the trait influencing the level of self-esteem. The low value of self-esteem obtained in this study may be the outcome associated with the discomfort of replacing a lost tooth, coping with a new one, and a-not-too

satisfactory dental aesthetics (Mandeva et al., 2021). Furthermore, due to the perceived evaluations of the self-explaining self-esteem, there may be temporary flexibility in the self-assessment of self-worth experienced by the participants in this study (National Institute of Mental Health, 2008). Therefore, for patients with new dentures, caution should be exercised in predicting their capability for post-implant care from the assessment of their self-esteem and self-efficacy.

Table 3 reveals the pattern of responses to each of the items on denture self-efficacy rehabilitation. The results (Table 3) are profound because they reveal that in spite of the low self-esteem of respondents, high self-efficacy was reported by the same participants. For example, on the item, therapy that requires me to chew, 27(62.8%) of the respondents strongly agreed that they could go through the therapy that required them to chew, which means that majority of the respondents reported a high denture self-efficacy rehabilitation. Only two of the items recorded a less than 50% denture self-efficacy rehabilitation of the respondents. The items are: Take instructions after fitting of dentures and wear dentures no matter the pain. The findings on these two items were strong indications of a need to measure the denture self-efficacy rehabilitation of patients during the first visit to a dental clinic.

The results in Table 4 suggest a negative correlation between self-esteem and denture self-efficacy rehabilitation ($r = -.367$, $p < 0.05$). This is interpreted to mean that as self-esteem increases, denture self-efficacy decreases. This is not in agreement with the previous studies (Orczyk, 1990 & Harorani et al. 2018) that suggested a positive association between self-esteem and self-efficacy. This finding is important because it reveals an important empirical result for medical practitioners who may need to apply evidence-based decisions on treatments and rehabilitation. Thus, evidence in Nigeria suggests a negative correlation, and this may be peculiar with Nigeria.

This result negates that of Nasiriziba (2020) where a positive correlation ($p < 0.001$; $r = 0.54$) was found for patients with an intestinal stoma. Our result corroborates the findings of Ang (2006) who reported that negative self-esteem is not a predictor of self-efficacy. This result is not in line with

the report that depression affects active participation in normal activities of daily living (National Institute of Mental Health, 2008). The findings of McFarland & Inglehart (2020) also negate our result because a wide range of depression and self-efficacy scores were obtained in their study. This suggests that a person can be extremely critical and express negativity at one's self and still believe that one can be accomplished at one's tasks, especially when guidelines are stipulated as is always the case with treatment instructions. Therefore, dentists should strive to measure the level of self-esteem and self-efficacy of their patients simultaneously. Assumptions on the level of one variable should not be predictive of the other. Also, clear instructions should be outlined to patients regarding their drugs and rehabilitation therapy. Intervening strategies that would encourage specific and contextual rehabilitation need to be developed and adopted.

Implication for rehabilitation

Literature affirms that self-esteem is associated with improved quality of life. It is important to advocate special attention to the self-esteem and self-efficacy of patients prior to the replacements of new dentures. Hospital settings are sometimes associated with discomfort for some patients, especially in dental clinics. Due to pain, anxiety and swellings of the gum and cheeks, self-esteem may be impacted negatively. A further implication of the findings of this study is that psychologists are relevant and have a significant role to play in the process of the complete treatment for denture wearers and, by extension, treatment for other medical challenges.

In conclusion, a clinic for counselling psychology may be set up to undertake pre-denture intervention for the assessment of self-esteem and self-efficacy. Due to early detection of insufficiency of these variables, dentists, nurses and psychologists would have the opportunity to participate in the care of their patients through psychological profiling that would enrich a holistic intervention programme.

Study limitations

Future studies are needed with a larger sample. Additionally, we are suggesting that the variables in this study should be measured on the first visit of dental patients to enable comparison. Also, survey data may be fraught with social desirability effects. However, the obtained data from the available patients in this study are valid scores of the two variables, and the analyses were carefully conducted.

Tables

Table 1: Demographic Characteristics of Respondents (N=43)

	Frequency	Percentage
Age (Years)		
21-30yrs	4	9.3
31-40yrs	3	7
41-50yrs	7	16.3
50yrs and above	29	67.4
Total	43	100
Gender		
Male	25	58.1
Female	18	41.9
Total	43	100
Educational Qualifications		
WAEC/NECO	12	27.9
First Degree	22	51.2
HND	7	16.2
M.Sc and above	2	4.7
Total	43	100
Ethnic Group		
Igbo	4	9.3
Yoruba	35	81.4
Others	4	9.3
Total	43	100
Marital Status		
Single	13	27.9
Married	21	48.8
Divorced	1	2.3
Widowed	5	11.6
Separated	3	7
Total	43	100

Table 2: Pattern of Responses to Self-Esteem

Self-esteem	SA	A	D	SD
1. I am no good at all	22(51.2%)	10(23.3%)	8(16.3%)	3(9.3%)
2. No pride in what I do	16(37.2%)	11(25.6%)	10(23.3%)	6(14%)
3. Feel useless at times	20(46.5%)	13(30.2%)	6(14%)	4(9.3%)
4. Feel I am a failure	22(51.2%)	17(39.5%)	1(2.3%)	3(7%)

Note: SA – Strongly Agree; A – Agree; D – Disagree; SD – Strongly Disagree

Table 3: Pattern of Responses to Denture Self-efficacy Rehabilitation

DSER: Do therapy that requires me to	SA	A	AD	SD
1. Therapy that requires me to smile	27(62.8%)	11(25.6%)	5(11.6%)	-
2. Therapy that requires me to chew	23(53.5%)	11(25.6%)	7(16.3%)	2(4.7%)
3. Therapy that requires me to speak	30(69.8%)	6(14%)	5(11.6%)	2(4.7%)
4. Therapy that requires me to socialize	27 (62.8%)	9(20.9%)	6(14%)	1(2.3%)
5. Feel a sense of confidence in myself	29(67.4%)	11(25.6%)	2(4.7%)	1(2.3%)
6. Normal activities after their rehabilitation	27(62.8%)	9(20.9%)	5(11.6%)	2(4.7%)
7. Wear their dentures every day	31(72.1%)	8(18.6%)	2(4.7%)	2(4.7%)
8. Take instructions after fitting of dentures	19(44.2%)	20(46.5%)	4(9.3%)	-
9. Wear dentures no matter my emotions	23(53.5%)	14(32.6%)	5(11.6%)	1(2.3%)
10. Wear my dentures no matter how tired	28(65.1%)	10(23.3%)	3(7%)	2(4.7%)
11. Wear dentures in spite of other illness	22(51.2%)	13(30.2%)	4(9.3%)	4(9.3%)
12. Wear dentures no matter the pain	16(37.2%)	13(30.2%)	6(14%)	(18.6%)

Note: SA – Strongly Agree; A – Agree; D – Disagree; SD – Strongly Disagree

Table 4: Correlation Matrix on self-esteem and denture self-efficacy

	X	SD	Self-esteem	Self-efficacy
Self-esteem	7.33	2.4	-	-.367*
D-self-efficacy	40.60	6.13	-.367*	-

Correlation is significant at the .05 level (2-tailed)*

References

- Ahmad, A. & Safaria, T. (2013). Effects of self-efficacy on students' academic performance. *Journal of Educational, Health and Community Psychology*, 2(1), 22-29, 2013.
- Ang, R., Neubronner, M., Ohi, S., & Leong, V. (2006). Dimensionality of Rosemberg's Self-esteem scale among normal-technical street students in Singapore. *Current Psychology*, 25(2), 120-131.
- Bandura, A. (1977). "Self-efficacy: toward a unifying theory of behavioral change". *Psychological Review*, 84(2), 191-215.
- Bandura, A. (1997). *Self-efficacy: The existence of control*. 1st ed. New York, NY: Worth Publishers.
- Dumitrescu, A. L., Zetu, L., Teslaru, S. (2012). Instability of self-esteem, self-confidence, self-liking, self-control, self-competence and perfectionism: associated with oral health status and oral health-related behaviour. *International Journal of Dental Hygiene*, 22-9. doi:10.1111/j.1601-5037.2011.00519.x.
- Harorani, M., Safarabadil, M., Jadidil, A., Seavey, J. Masmouei, B. & Bazrafshan, M. R. (2018). Relationship between Self-Efficacy and Self-Esteem in Patients with Cancer. *Journal of Client-Cen-*

tered Nursing Care, 4(1), 45-52. <https://doi.org/10.32598/10.32598/jeene.4.1.45>.

Hayloo, N. (2014). Relationships between self-efficacy, self-esteem and procrastination in undergraduate psychology students. *Iranian Journal of Psychiatry and Behavioural Sciences*, 8(3), 42-49).

Hermann, K. S. (2005). The influence of social self-efficacy, self-esteem, and personality differences on loneliness and depression. A doctoral dissertation retrieved from <http://rave.ohiolink.edu/et/etdc/view?ccnum=osu1112104621>.

Hoffman, A. J. (2013), Enhancing self-efficacy for optimised patient outcomes through the theory of symptom self-management. *Cancer Nursing*, 36(1), E16-E26. Doi:10.1097/NCC.0b013e318249730a.

Huff, M., Kinion, E., Kendra, M. A., & Klecan, T. (2006). Self-esteem: A hidden concern in oral health. *Journal of Community Health Nursing*, 23(4), 245-255.

Hui, C., Wong, A. & Ijosvold, D. (2007). "Turnover intention and performance in China: the role of positive affectivity, Chinese values, perceived organizational support and constructive controversy" *Journal of Occupational and Organizational Psychology*, 80(4), 735-751.

Johan, S., Tine, V. D., Hanne, D., & Michel, P. (2017). Impact of mental health problems on physical self-esteem. *European Psychomotricity Journal*, 93-132.

Kenzik et al. (2016). Treatment summaries and follow-up care instructions for cancer survivors: improving survivor self-efficacy and health care utilization. *Oncologist*, 21(7), 817-824.

Keshen, A. Helson, T., Town, J., & Warren, K. (2017). Self-efficacy as a predictor of treatment outcome in an outpatient eating disorder program. *Eat Disorder*, 25 (5), 406-419.

- Kim, et al. (2012). Effects of cancer-overcome BeHaS exercise program on shoulder external rotation, cancer coping and group cohesion in mastectomy patients. *Journal of Muscle and Joint Health*, 19(3), 319-328. DOI:10.5953/JMJH.2012.19.3.319.
- Korpershoek C., Van Der Bijl J. & Hafsteinsdottir, T.B. (2011). Self-efficacy and its influence on recovery of patients with stroke: a systematic review. *Journal of Advanced Nursing*, 67(9), 1876-1894, doi:10.1111/j.1365-2648.2011.05659.x.
- Kragt. L., Wolvius, E. B., Jaddoe, V. W.V. Tiemeier, H. & Ongkosuwito, E. M. (2018). Influence of self-esteem on perceived orthodontic treatment need and oral health-related quality of life in children: the Generation R Study. *European Journal of Orthodontics*, 40 (3), 254-261. doi: 10.1093/ejo/cjx054.
- Lane, J., Lane, A. M., & Kyprianou, A. (2004). Self-esteem, self-efficacy and their impact on academic performance. *Journal of Social Behaviour and Personality*, 32(3), 247-256.
- Maujean, A. & Davis, P. (2013). The relationship between self-efficacy and well-being in stroke survivors. *International Journal of Physical Medicine Rehabilitation*, 1(7), 1-10.
- Maggirias J. & Locker D. (2002). Psychological Factors and perceptions of pain associated with dental treatment. *Community Dental Oral Epidemiol*, 30, 151 – 159.
- Maggiori, C., Johnston, C. S. & Rossier, J. (2016). Contribution of personality, job strain, and occupational self-efficacy to job satisfaction in different occupational contexts. *Journal of Career Development*, 43, 244-259. doi: 10.1016/j.jrp.2013.08.011.
- Maibach, E., and Murphy, D. (1995) Self-efficacy in health promotion research and practice: Conceptualization and measurement. *Health Education Research*, 10, 37-50. doi: 0.1093/her/10.1.37.

- Mandava, P., Singaraju, G.S., Obili S., Nettam, V., Vatturu S. & Erugu, S. (2021). Impact of self-esteem on the relationship between orthodontic treatment and the oral health-related quality of life in patients after orthodontic treatment – a systematic review. *Medicine and Pharmacy Reports*, 94(2). 158-169. doi: 10.15386/mpr-1843.
- McFarland, M. L., & Inglehart, M. R. (2020). Depression self-efficacy and oral health: An Exploration. *OHDMBSC*, 10(4), 214-222. 10.15386/mpr-1843.
- Nasiriziba, F., Saati, M., Haghara, H. (2020), Correlation between self-efficacy and self-esteem in patients with intestinal stoma. *British Journal of Nursing*, 29 (16), 2020. <https://doi.org/10.12968/bjon2020.29.16.S22>.
- National Institute of Mental Health (NIMH). (2008). Depression. *National Institute of Health Publication No. 083561*. Bethesda, MD: NIMH.
- Oancea, R., Timar, B., Papava, I., Christina, B. A., Ilie, A. C., Dehelean, L. (2020). Influence of depression and self-esteem on oral health-related quality of life in students. *Journal of Internal Medicine Research* 48(2), 300060520902615. Doi:10.1177/0300060520902615.
- Oladipo, S. E., & Malomo, B. I. (2014). Exploring the Suitability of the Rosenberg Self-esteem Scale for Adult Use in South-Western Nigeria. *Gender and Behaviour*, 12 (1), 6027-6034.
- Orczyk, C. L. B. (1990). A model of faculty socialization: Critical career events, self-esteem and their effect on self-efficacy and scholarly achievement. A PhD Dissertation. Michigan: University of Michigan.
- Ozdemiroglu, F., et al., (2017). Self-esteem, pain and suicidal thoughts in a sample of cancer patients. *Journal of Mood Disorders*, 7(3), 156-162. DOI:10.5455/jmood.20170804091851.