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Factors Predicting Emotional Intelligence among Women in Jordan

Lamees A Gharram

lamees.gharam@bau.edu.jo

Al-Balqa Applied University

Renad M Hazaymeh

Al-Balqa Applied University

Rafi Alnjadat

Al-Balqa Applied University

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Abstract

Objective

Socioeconomic and lifestyle factors are important for Emotional Intelligence. The current study investigates the factors predicting EI among women in Jordan.

Methods

The study included 315 healthy women aged 18–45 years without ongoing health conditions. An assessment of sleep quality was performed using the Pittsburgh Sleep Quality Index (PSQI) while the Trait Meta-Mood Scale (TMMS) was used to assess EI.

Results

Multiple linear regression analysis showed that, among all variables included in the model, total sleep score ($p = 0.03$), monthly income ($p = 0.04$), and educational level ($p = 0.04$) were significantly associated with emotional intelligence. Furthermore, one-way ANOVA demonstrated a significant effect of educational level on TMMS scores ($p < 0.001$). One-way ANOVA showed a significant main effect of monthly income on TMMS scores ($p < 0.001$). Pearson product–moment correlation analysis indicated a significant negative association between sleep quality and TMMS scores ($r = -0.17$, $p = 0.002$), with higher global PSQI scores reflecting poorer sleep quality. Additionally, an independent-samples *t*-test showed significantly higher TMMS scores among participants with good sleep quality compared to those with poor sleep quality ($p < 0.01$).

Conclusions

The findings of this study demonstrate that educational level, monthly income, and sleep quality are significant predictors of emotional intelligence. It is important to consider lifestyle and socioeconomic factors when designing interventions to enhance EI.

Introduction

Emotional intelligence (EI) refers to the ability of individuals to recognize, comprehend, and manage emotions in themselves and others. In 2025, researchers indicate that individuals with high EI levels exhibit superior coping mechanisms when facing modern-day stressors. Besides mental health, EI also plays an important role in various populations, especially in predicting academic and professional success, since it facilitates effective communication and decision-making (1, 2) (3). There are many physiological and psychosocial transitions occurring during the period of adolescence and young adulthood. The development of emotional intelligence is an essential component of adaptation during

this time (4). There are distinct gender differences in recent studies, pointing out that young females consistently score higher in empathy and social skills than their male counterparts (5). A high level of emotional regulation is required to maintain psychological equilibrium for young women, because they often face unique societal and emotional pressures (6).

There is no doubt that sleep is crucial for our physiological, psychological, and overall well-being. (7, 8). Sleep deprivation is associated with altered EI, moodiness, frustration, and anger. As a result of sleep deprivation, it has been shown that people have difficulty identifying emotional facial expressions, are unable to make decisions based on emotions, they can't suppress unwanted negative thoughts, and are unable to express their emotions through facial and vocal cues (7). Furthermore, many demographic and socio-economic factors impact EI, including educational level, income, age, and social environment. Research indicates that these factors can have a big impact on individuals' emotional awareness, regulation, and interpersonal skills (9). Therefore, fostering EI and healthy lifestyle choices contributes to psychological well-being and reduces mental health problems, and improves overall health (10).

Even though EI has been studied among Jordanian student populations in general, there remains a notable research gap concerning how sociodemographic, socio-economic, and sleep quality impacts on EI specifically in young Jordanian women. Many studies focus on clinical populations or non-Middle Eastern contexts, ignoring the specific sociocultural pressures Arab women face. Therefore, this cross-sectional study aims to investigate the association between selected sociodemographic and socio-economic factors with EI and the association between sleep quality and EI among young females in Jordan. The findings of this study may enhance understanding of key factors related to EI among women in Jordan and contribute to the development of targeted strategies to improve EI and overall well-being in this population.

Materials and Methods

Study Design, population, and recruitment method

Three hundred and fifteen healthy females aged 18–45 without ongoing health conditions were included in this predictive cross-sectional study to determine factors predicting emotional intelligence among young women in Jordan.

In October 2025, participants were recruited using an online questionnaire developed by "Google Form". Potential participants were invited via email to complete the survey. A survey platform was configured to prevent multiple responses from the same user or email address, as well as to monitor participants' IP addresses, to ensure data integrity. Socio-demographic and economic and health-related variables—including age, weight, height, gender, marital status, level of education, monthly income, health status, and place of residence—were also collected.

Ethical Issues

Ethical approval for this study was obtained from the Institutional Review Board at Al-Balqa Applied University (ID No: 7/1/2025/2026). The study required collecting data using questionnaires, thus minimum risk was involved. Informed consent was obtained electronically after participants were briefed about the study objectives and procedures. Confidentiality and privacy were ensured throughout all stages of data handling, including collection, storage, analysis, and reporting.

Assessments

Sleep quality

The Pittsburgh Sleep Quality Index (PSQI) was used for the assessment of sleep quality. It consists of nineteen individual items, which evaluate seven components of sleep quality, each with separate sub-scores (scored 0–3). These components are (1) sleep duration; (2) sleep disturbance; (3) sleep latency; (4) daytime dysfunction due to sleepiness; (5) sleep efficiency; (6) overall sleep quality; and (7) sleep medication usage. These seven component sub-scores are subsequently added together to yield one global score of 0–21, with higher scores indicating worse sleep quality (11). A global PSQI score of ≤5 indicates good sleep quality and >5 indicates poor sleep quality (11). PSQI showed acceptable reliability and is valid to be used (12).

Emotional Intelligence

The Trait Meta-Mood Scale (TMMS) is a 30-item, 3-factor self-report measure of perceived emotional intelligence that has relevance for mindfulness studies. It was used to assess emotional intelligence with five items rated on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). In this scale, meta-mood experience is measured, evaluated, and regulated in order to provide an index. As measured by its three subscales, TMMS purports to measure three components of emotional intelligence, namely, Attention (paying attention to feelings), Clarity (emotional clarity), and Repair (fixing moods) (13). The higher score represents more typical emotional intelligence. Results showed that the TMMS scale had adequate validity and reliability (14, 15).

Statistical analysis

The data was analyzed using SPSS version 21. The means and standard deviations of continuous variables are expressed as mean + SD or mean + SE, and categorical variables are expressed as percentages. A p-value < 0.05 was set as the statistical significance level. Multiple linear regression was conducted to identify significant predictors of emotional intelligence. Also, one-way ANOVA was used to examine differences in emotional Intelligence according to education and monthly income. Additionally, LSD post hoc was used for pairwise comparison. Moreover, a Pearson product-moment correlation analysis was conducted to examine the association between sleep quality and TMMS. Additionally, an independent t-test analysis was used to compare EI between good and poor sleep quality.

Results

Participants

Three hundred and fifteen apparently healthy Females volunteered for the study. **Table 1** shows the average age, weight, height, and BMI, as well as socioeconomic data including disease status, residency, and type of residence, education level, work status, marital status, and monthly income.

Table 1: Participant Socioeconomic Descriptions (n=315)	
Variable	**Mean ± SD**
Age [years], mean (SD)	30.18±8.99
Weight [kg], mean (SD)	67.3±14.16
Height [cm], mean (SD)	1.61±0.06
BMI [kg/m2], mean (SD)	25. 91±5.01

	Category	n	%
Disease status	No diseases	315	100.0
Residence	Rural	93	29.5
	Urban	222	70.5
Type of residence	Living with family	252	80.0
	Living alone	52	16.5
	Sometimes alone / sometimes with family	11	3.5
Education level	Secondary or less	45	14.3
	Diploma	113	35.9
	Bachelor’s degree	111	35.2
	Postgraduate studies	46	14.6
Work status	Student	114	36.2
	Government employee	70	22.2
	Private sector	95	30.2
	Unemployed	36	11.4
Marital status	Single	146	46.3
	Engaged	7	2.2
	Married	148	47.0
	Divorced	12	3.8
	Widowed	2	0.6
Monthly income	low income	114	36.2
	Middle income	132	41.9
	High income	69	21.9

Factors Contributing to Emotional Intelligence

The linear regression model explains 8.9% (F=3.3; p<0.001) of the variation in EI. Additional analysis reveals that among all the factors included in the model, only the total sleep score (β=-0.12; CI=-0.35/-0.01; p<0.037), income (β=0.13; CI=0.04/1.94; p<0.041), and education (β=0.13; CI=0.005/1.60; p<0.049) are related to EI.

Differences in Emotional Intelligence according to education and monthly income

A significant effect of education level (P<0.001) for TMMS is revealed with ANOVA show in Figure 1. Subgroup post hoc shows greater TMMS in postgraduate to those with Secondary education or less (P<0.001) and diploma (P<0.009). In contrast, no statistically significant differences were observed among participants' postgraduate and bachelor's (p>0.087), as well as with Secondary or less education versus diploma education (p>0.440), and nor between bachelor's versus diploma degree (p>0.710).

An additional one-way ANOVA reveals a main effect (p<0.001) for TMMS according to monthly income, as shown in Figure 2. Subgroup post hoc shows greater TMMS in participants with high (P<0.001) and middle (P<0.020) versus low monthly income, without differences (p>0.260) between high and middle.

Relationship of sleep quality with TMMS score

A Pearson product-moment correlation analysis demonstrated an association (r = −.17, p = .002) between sleep quality and TMMS scores, as shown in Figure 3. Higher global PSQI scores indicate poorer sleep quality. An additional independent samples t-test revealed a greater TMMS score in participants with good versus poor sleep quality (p < 0.010), as shown in Table 2.

Table (2). Differences in TMMS score according to Sleep Quality (Good vs. Poor)

Pearson Correlation between Global PSQI Score and Total TMMS Score (N = 315)

SLEEP QUALITY	N	Mean ± SD	P value
POOR	232	84.45±5.65	0.010
GOOD	83	86.33±5.80	0.010

Discussion

Socioeconomic and lifestyle factors, especially education (16), income (17), and sleep quality(18), are important for EI. However, evidence regarding their association with Emotional Intelligence among young

women in Jordan has not examined. Therefore, this study examines the factors predicting EI in this population. The results revealed higher TMMS scores among young females with postgraduate compared to those with Secondary education or less and a diploma. In addition, the TMMS scores were greater in participants with high and middle versus low monthly income. TMMS scores are also higher in young females with good versus poor sleep quality. Collectively, these results emphasize that both lifestyle-related and socioeconomic factors play a crucial role in emotionalfunctioning.

Interestingly, our Jordanian sample showed that the relationship between sleep quality and EI was particularly pronounced compared to studies in Western contexts. This might reflect the unique sociocultural pressures Jordanian women navigate, where familial responsibilities, social expectations, and economic constraints could intensify the impact of poor sleep on emotional regulation. Such contextual factors make our findings especially relevant for developing culturally sensitive interventions in Jordan and similar settings.

Despite widespread scientific study of emotional intelligence (EI), evidence of socioeconomic factors affecting EI is relatively scarce, particularly in Middle Eastern contexts like Jordan. Our findings indicate that income and education were significant predictors of emotional intelligence, while other examined sociodemographic variables were not. According to previous research, income and education play a central role in emotional and psychological functioning. A higher level of socioeconomic resources leads to better access to education and social support, along with adaptive coping strategies that facilitate emotional development. As a result of these findings, economic and educational resources may be more significant factors in determining emotional intelligence than other background characteristics, highlighting their unique effect on emotional functioning in this population (19, 20). EI may be enhanced by higher income due to greater access to educational resources, social support, and opportunities for development of adaptive coping skills, as well as decreased stress and improved emotional regulation. Based on previous research, it is possible for educational environments to facilitate social interaction, critical thinking, and exposure to diverse perspectives, which all contribute to the development of emotional intelligence (21). As well, greater educational attainment can lead to greater levels of self-awareness, social understanding, and emotional regulation, explaining its stronger predictive effect as compared with other factors (22).

Furthermore, in this study, sleep quality was found to be a significant predictor of emotional intelligence, aside from income and education factors. Sleep quality has consistently been linked with increased intensity and duration of positive emotion, and decreased intensity of negative emotion in young adults (23). In Jordan, studies have revealed that women report more sleep disturbances, and poor sleep quality has a strong connection to mental and emotional health (24). There may be an explanation for this association since sleep plays a crucial role in regulating emotions, making us more aware of emotions, and coping with them, all core elements of emotional intelligence. According to previous research, sex-specific biological mechanisms could explain the stronger effect observed among females (25, 26). According to previous research, young women are more likely to experience sleep disturbances due to differences in hypothalamic-pituitary-adrenal activity and circadian rhythms (27) (28).

Furthermore, when sleep quality is poor, females tend to be much more responsive to stressors, resulting in further impairment of their emotional processing (29).

Overall, the present results indicate that income, education, and sleep quality are the most important factors that predict emotional intelligence, while other factors were not significant predictors. Considering socioeconomic conditions and sleep health is critical to examining emotional intelligence, as these findings suggest, interventions aimed at enhancing EI among young females should emphasize improving education and economic opportunities, along with promoting healthy sleep habits.

Implication

Sleep quality, income, and educational level are significant predictors of emotional intelligence among females aged 18–45, according to this study. There is a need for interventions addressing both socioeconomic factors and sleep in these results. Specifically in the Jordanian context, addressing income and education disparities and sleep-focused strategies could help enhance women's emotional intelligence and reduce emotional dysregulation.

Further research should examine the causal pathways between sleep, income, education, and emotional intelligence, investigate potential mediators, including stress and coping strategies, and examine gender differences for a deeper understanding of emotional functioning's biological and social determinants.

Limitation

Despite several strengths in this study, several limitations need to be noted. First, the cross-sectional design limits causal interpretation, making it impossible to determine the direction of the relationships between education, sleep quality, income, and emotional intelligence. Secondly, despite consideration of a wide range of demographic and socioeconomic variables, only sleep quality, income, and educational level exhibited significant predictive abilities. It may be that the sample is relatively homogeneous or that there is only a limited variation within certain categories that influences the lack of significant associations with other variables. Finally, the study surveyed only young Jordanian females, which could limit its generalizability to males or other age groups.

Conclusion

The findings of this study demonstrate that educational level, monthly income, and sleep quality are significant predictors of emotional intelligence. Good sleep quality was associated with higher emotional intelligence scores, highlighting the essential role of quality sleep in emotional regulation and social functioning. Further, higher incomes and higher educational attainments were associated with improved emotional intelligence. This may be due to increased access to resources, learning opportunities, and effective coping mechanisms. A key finding of these studies emphasizes the importance of considering lifestyle and socioeconomic factors when developing interventions designed to enhance emotional

intelligence. Future research is recommended to employ longitudinal designs to better understand the causal relationships between these predictors and emotional intelligence.

Abbreviations

EI: emotional intelligence

TMMS: trait meta mode scale

PSQI: Pittsburgh sleep quality index

Declarations

Conflict of interest

The author reports no conflict of interest.

Author contribution

A collaborative effort was made by all authors in the following areas: conceptualization, data curation, formal analysis, methodology, and writing the original draft, reviewing the final draft and making revisions.

Ethics approval and consent to participate

Ethical approval for this study was obtained from the Institutional Review Board at Al-Balqa Applied University (ID No: 7/1/2025/2026). Informed consent was obtained electronically after participants were briefed about the study objectives and procedures. This study adhered to the Declaration of Helsinki.

Data availability

The data sets generated and analyzed during the current study are not publicly available due to participant privacy considerations but are available from the corresponding author on reasonable request.

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Consent for publication

Not applicable (no individual data in any form).

Competing Interests

There is no competing interest.

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Figures

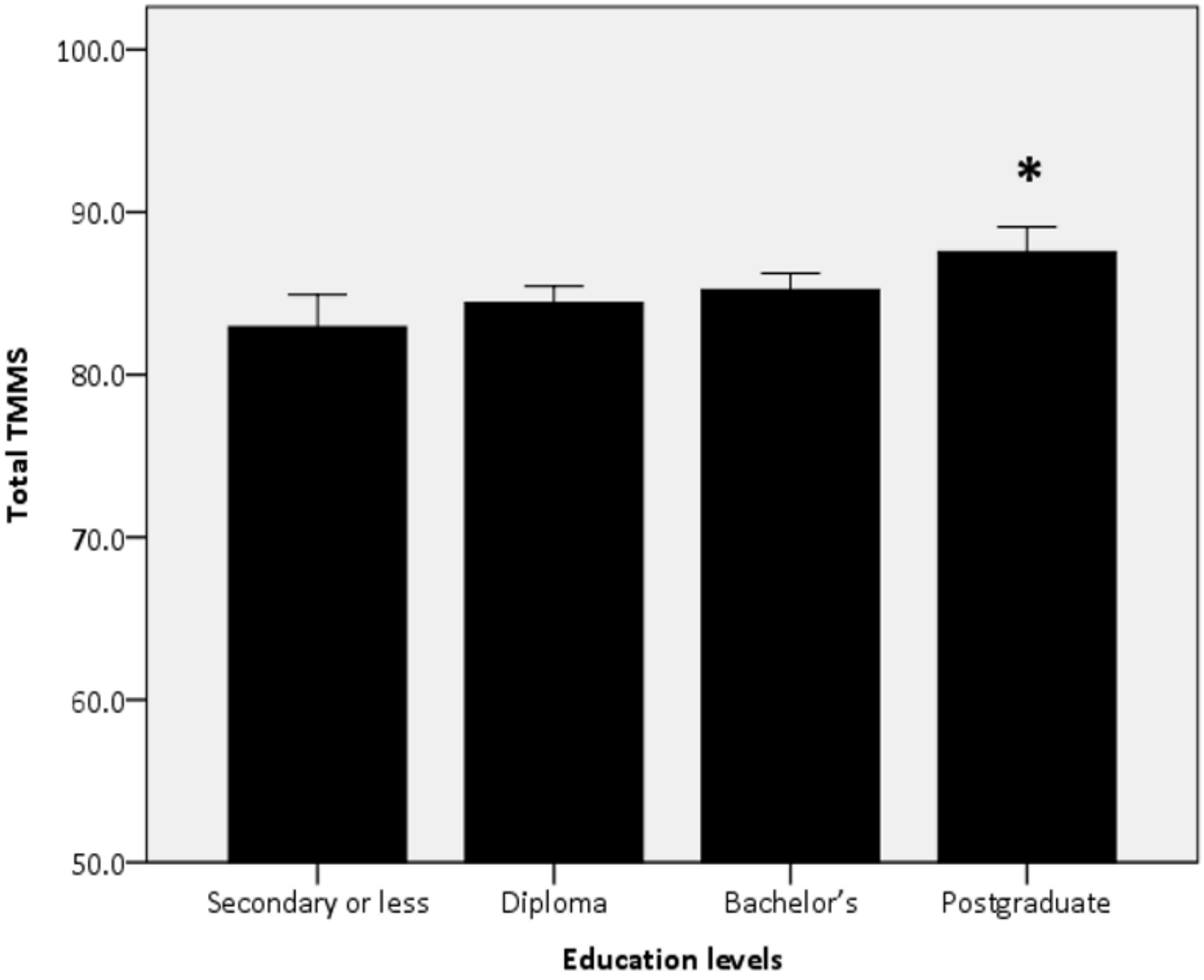


Figure 1

Differences in TMMS Score according to Education levels. *p<0.05, statistically significant versus Secondary education or less and Diploma.

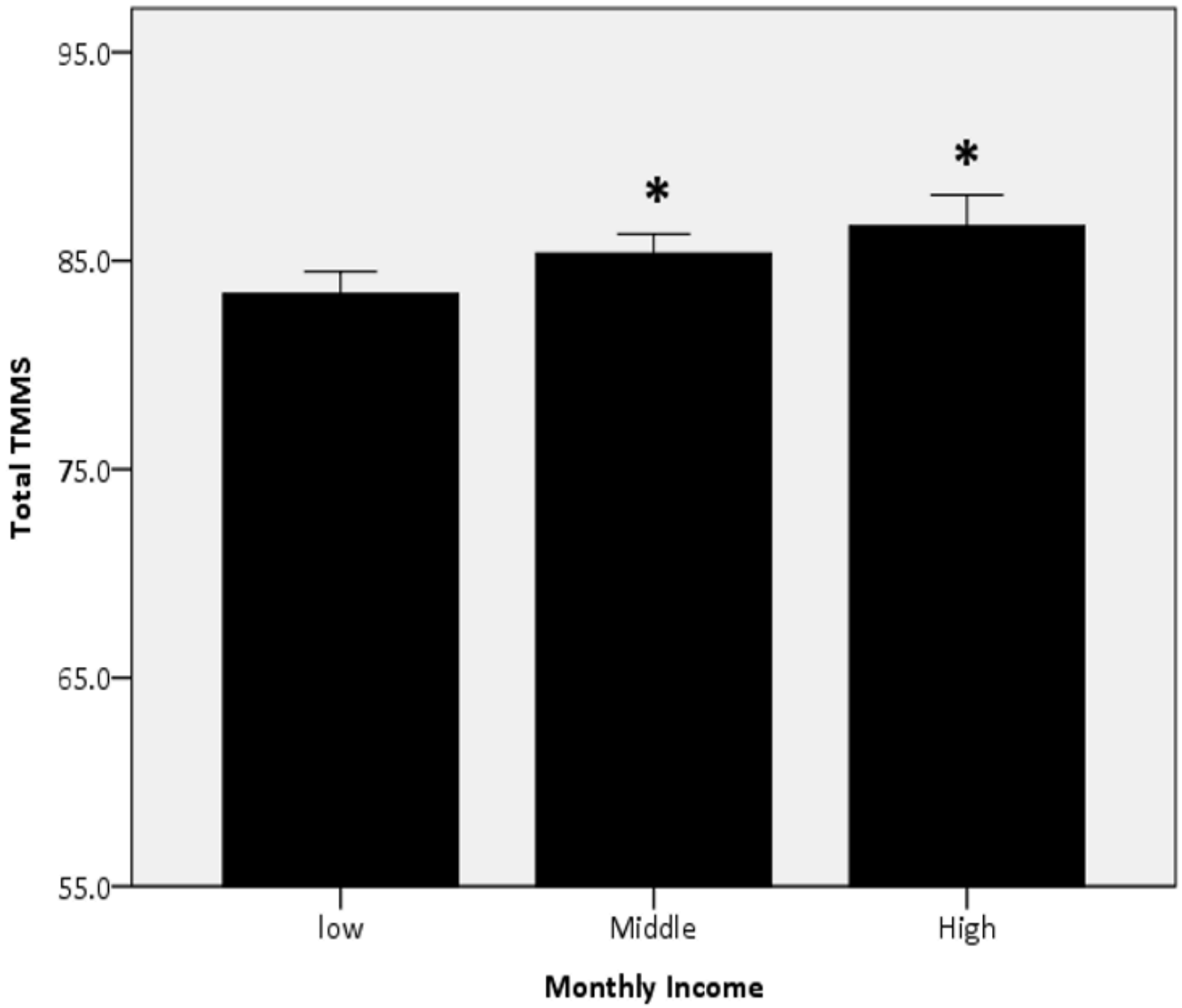


Figure 2

Differences in TMMS Score according to Monthly Income. *p<0.05, statistically significant versus low income.

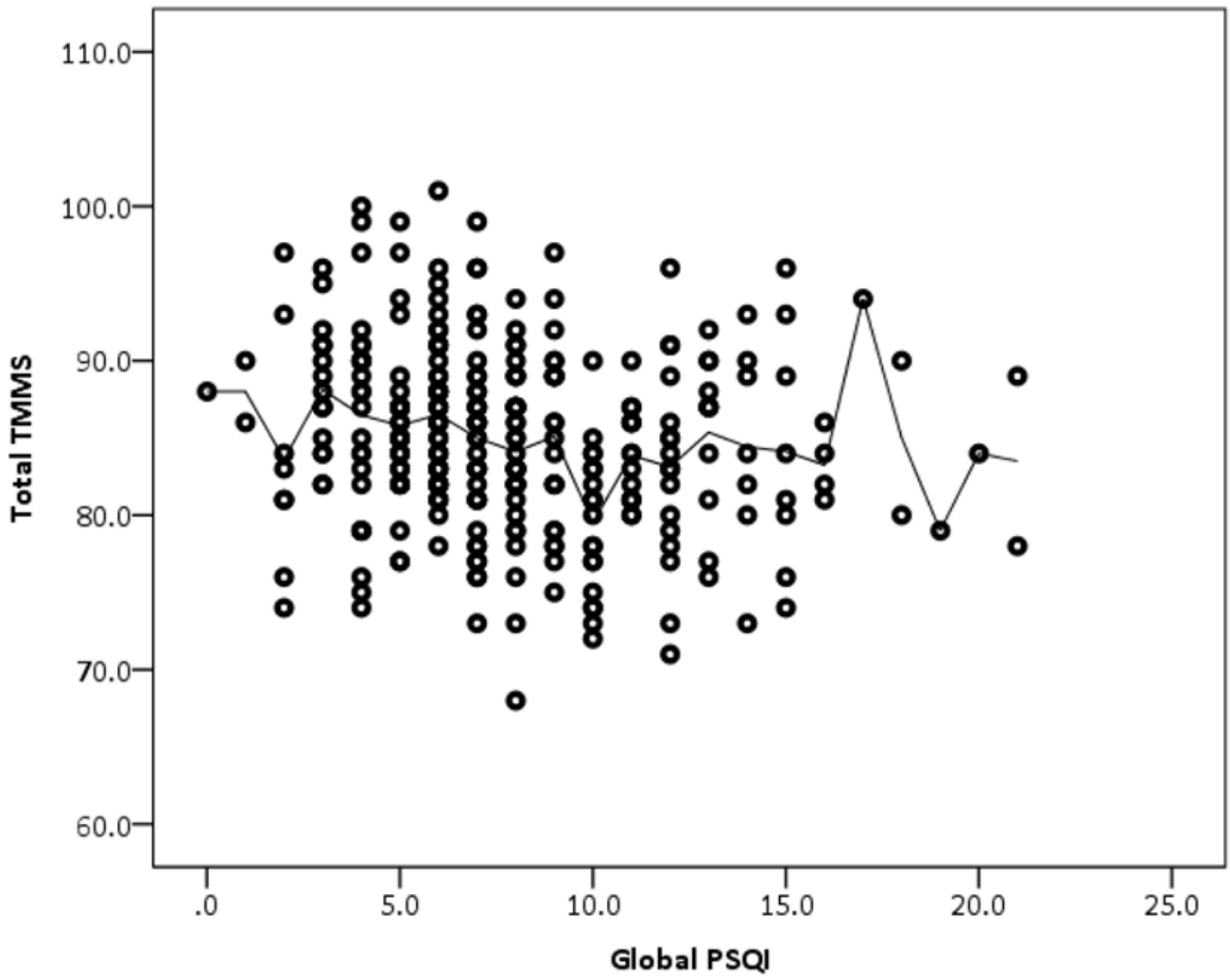


Figure 3

Differences between sleep quality and TMMS scores.