Link between lifestyle and self-regulated development as components of academic performance: basis for a psychoeducational intervention

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Abstract

Students with differing profiles vary in their academic performance. The present study utilised an epistemological assessment of the students' lifestyle according to a number of components. Consequently, a number of compelling results emerged. However, the stand-alone finding revealed that emotional support from teachers was not as effective as that from parents in predicting adolescent motivation in reference to their academic performance. Nonetheless, perceived academic support from teachers was helpful for adolescents in predicting stronger mastery goals. Support from peers worked as a buffer against maladaptive motivation, predicting weaker performance-avoidance goals and lower test anxiety. It is recommended to focus on pairing process of students' academic performance to demographic characteristics, lifestyle, and personal perception.

Keywords: academic performance; psychoeducational intervention, university students

1. Introduction

University life can be intellectually rewarding. However, the challenges faced by both new and old students can be significantly demanding as they are expected to take responsibility for their own learning, manage their workload, and are also pressured to socialize with their peers. Needless to say, being a university student has never been easy. At this stage, and individual decided his future career option and this could have far greater implications in the coming years. There is constant struggle to juggle every commitment, patience, and hard work are required to fulfill the need of maintaining good marks while balancing extracurricular activities alongside with being satisfied and happy with personal life, especially with one's relationship with the family. Each factor in one's lifestyle is necessary and may affect his development – in a student's case his academic performance.

Even before attending university, students are already facing stress. Bullying for instance, is one of the issues face by schoolchildren. The association between bullying behaviour and academic achievement was investigated in 1,016 children from primary schools (6–7-year-olds/year 2: 480; 8–9-year-olds/year 4: 536). Children were individually interviewed about their bullying experiences using a standard interview. Key Stage I National Curriculum results (assessed at the end of year 2) were collected from class teachers, and parents completed a behaviour and health questionnaire. Results revealed no relationship between direct bullying behaviour and decrements in academic achievement. Conversely, higher academic achievement at year 2 predicted bullying others relationally (e.g., social exclusion at year 4). Relational victimization,

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special educational needs (SEN), being a pupil from a rural school or small classes and low socioeconomic status (SES) predicted low academic achievement and frustration at school leads to direct, physical bullying behaviour (Woods & Wolke, 2004).

Pharmacy, as a field of study, is undertaken by people who wish to pursue a profession in the pharmaceutical industry. It requires an in-depth study of identification, discovery, isolation, synthesis, and formulation of biologically-active compounds for clinical use. In the Philippines, the bachelor's programme consists of 72 units of government-mandated general education courses, 30 units of essential core subjects, and 90 units of professional pharmacy courses. This is delivered through lectures and laboratory courses with a thesis requirement and internships in three major pharmaceutical areas specifically within the community, hospital, and manufacturing. This is usually completed in a span of four years before they are eligible to take the board exam. If they pass, then they can finally take their oaths to become licensed pharmacists.

As observed by Relojo and Pilao (2016), with the emergence of academic social networking services (ASNS), the landscape of academic networking has been dramatically revolutionized in the past decade. However, to date, there is a scarcity of literatures that offer a general overview of the services available to researchers. The current paper sought to provide a general overview of the services available to researchers. Relojo and Pilao's work sought to provide a general overview on the current trends within the ASNS, and ultimately, its impacts for the digital academic. It specifically focused on popular ASNS such as Academia.edu, Mendeley, the now defunct Piirus, and ResearchGate. Twitter – albeit, not primarily an ASNS – has been taken into account. Discussion centred on the benefit, key contributions, and future directions of these platforms to both seasoned and early career researchers 9ECRs).

As a pharmacy student, each academic year is packed with demands and requirements. During the first year, mastery of the general core subjects and a taste of history of what pharmacy is, not to mention the adjustments, welcome them. Second year is filled with the initial dose of the course given that the pharmacy courses were introduced. Third year can be characterized as the most challenging because of the numerous quizzes, memorization, and lectures on top of the internship. But the final year is arguably the most exciting – and grueling, because of the research works they have to complete as part of their degrees. In European countries, in the UK for instance, it has been observed that students experienced significant moral growth throughout the course of their studies. A further, longitudinal study of the cohort, which attempts to correlated the moral development with age, sex, level of education, and mode of delivery of moral education is warranted (Gallagher, 2011.

Needless to say, teaching has to be taken into account as well. As explained in a previous study (Relojo, Pilao, & dela Rosa, 2015). Although teaching has been characterized as a profound emotional activity, little is known about the link between emotional quotient of educators and their work attitude behaviour. Also, it is often said that passion and emotion fuel an educator's teaching experience but there is a scarcity of knowledge as to what extent emotion could serve as a predictor of teaching attitude. This was also discussed on an earlier article by Relojo (2015).

The ability to read sufficiently and proficiently is the best way students can acquire various skills and knowledge, thus, reading is taught since the beginning of education, both formal and informal. Spiritual quotient and adversity quotient can also play a significant role (Relojo, 2013). Unfortunately, even in the university level there are still students who fail to develop sufficiently in one or more skills involved in effective reading. This problem rocks not only the Philippines' educational system but other countries as well, thus, many educators, local and foreign alike, emphasise that reading and literacy instruction must be properly addressed through appropriate reading instructional materials (Relojo, dela Rosa, & Pilao, 2016).

One study (Charupatanapong, McCormick, & Rascati, 1994) was designed to enlarge the scope of study and include a larger number of pharmacy students in all three professional years in three pharmacy schools, including both minority and non-minority students, four other demographic variables (gender, age, ethnicity, and

marital status), and four types of extracurricular activities (study hours, working hours, and hours contributed to both college and community activities). Also, the study included the development of extracurricular profiles of pharmacy students' who were more likely to have higher or lower academic performance.

It was noted that pre-pharmacy (grade point average) GPA was found to be the best and most powerful predictor of pharmacy students' academic performance for most of the demographic variables. However, the number of hours spent in community activities was found to be the best predictor for older and Black Americans. Predictors of pharmacy students' academic performance were found to be different among the demographic variables. No single group of variables would consistently predict pharmacy students' academic performance across demographic variables.

The predictors found in this study may only be valid for this sample, therefore future studies with new students are recommended. This information is useful to both the admission process and pharmacy educators. The admission committee can use such information to better select incoming students for the programme. The findings from this study will help pharmacy educators understand why some students do better academically than others. Finally, it would be interesting to examine the predictive power of other independent variables and see whether the results are different from this study. The present study assessed the lifestyle and self-regulated development among pharmacy students and how it impacts their academic performance.

The demographic profile was correlated with each lifestyle and academic performance through their GPA from first year to final year. Their lifestyle were analysed and assessed against their academic performance

1.1. Objective

The study aims to determine the trend in the development of the lifestyle and academic performance of pharmacy students, specifically, to understand the students' lifestyle according to socioeconomic status, daily activities, recreational activities, and dietary habits. The study also sought to evaluate their academic performance based on the students' general weighted average and to analyse their personal perception of the programme.

1.2. Methods

The main purpose of the research is to describe, explain, and validate findings. Thus, the study utilised descriptive research which aims to describe the population or phenomenon being studied. Stratified sampling was used to gather 254 pharmacy students who are in their final year. This technique is employed to ensure that each cohort will be represented and to avoid undersampling or oversampling.

1.3. Instrument

A self-made questionnaire was used to address the objectives of the study. The instrument was validated by three professionals from the fields of pharmacy, psychology, and education. The instrument was pre-tested to 10 samples that are not included as respondents of the study, and was ultimately distributed among final year students.

2. Results

A total of 254 students participated in the study through convenience sampling. The demographic profile of the sample was determined including their age, gender, civil status, religion, socioeconomic status, family type.

Given the fact that most of the respondents are 18–20 years old, 221 or 87.01% fall within this age bracket as shown on Table 1. On the other hand, the remaining 33 or 12.99% are 21 years old and above.

Greater share of the respondents are female. As illustrated in Table 2, 76.38 of the sample while the rest, 23.63% are male. This shows that the trend of the population of students taking the pharmacy programme is mostly females.

All of the respondents are single. This suggest that the respondents are fee of commitment and pressure of raising their own families and focuses mainly on their personal growth and development.

Out of 254 respondents, 251 (98.89%) are Christian, while 3 are Muslims (1.17%). The Philippines is one of only two nations in Asia with Roman Catholicism as the predominant religion (the other being East Timor), and is the third largest Catholic country in the world (after Brazil and Mexico).

Family as the basic unit of the society is considered as a crucial factor in the development of a person. In a country like the Philippines, strong family ties are embodied. More than half of the respondents (52.76%) have a family income of more than PHP 50,000. Clearly, it can be said that the families of the respondents are capable of providing their children's educational needs. The remaining percentage is divided into different income brackets. Following the majority, 55 or 21.56%, 33or 12.99%, and 28 or 11.02% are under the bracket whose income is between PHP 40,001 to PHP 50,000, PHP 30,001 to PHP 40,000, and PHP 20,001 to PHP 30,000 respectively.

One study (Davis-Kean, 2005) examined the process of how socioeconomic status, specifically parents' education and income, indirectly relates to children's academic achievement through parents' beliefs and behaviours. Data from a national, cross-sectional study of children were used for this study. Using structural equation modelling techniques, the author found that the socioeconomic factors were related indirectly to children's academic achievement through parents' beliefs and behaviours but that the process of these relations was different by racial group. Parents' years of schooling also was found to be an important socioeconomic factor to take into consideration in both policy and research when looking at school-age children.

In a country like the Philippines where people put a great premium in education, the goal to send their children to higher education is cardinal. Parents work hard to provide their children the best education possible. It is shown even with the sample this study obtained: 86.22% or 219 of the respondents said that their parents provide for their academic needs. Only 24 or 9.45% and 11 or 4.33% rely on scholarships and relatives.

Students' re-enrolment in the subsequent semester after their first semester at a four-year institution is a strong predictor of retention and graduation. This is especially true for students who transfer from a community college to a four-year institution because of the many external or non-academic factors influencing a student's decision to re-enrol. The logistic regression models showed that gender, age, and first-term GPA at the four-year institution were significant predictors of re-enrolment. These findings contribute to the growing literature on transfer students and may provide researchers and practitioners a greater understanding of how community college factors influence the progression and success for transfer students at four-year institutions (Nadasen & List, 2016).

The family's role is not only limited to providing financially to the students. It can also be the source of support emotionally and socially. Taking into account the role of the family, the students' home environment may affect their lifestyle and academic performance. Among the 254 respondents, 154 or 60.24% lives with nuclear family, 34 or 13.39% are with single-parent and 28 or 11.02% are living alone. While 20 or 7.87% belong to step family, 11 or 4.33% are with cross-generational and 8 or 3.15% are with blended family.

One study (Yang, et al., 2016) investigated the types of personal and family perfectionism, and their associations with learning stress, learning satisfaction, and self-reported academic performance level among 1020 Chinese elementary and high school students. Participants were categorized into three types for both perfectionists and perfectionistic families using cluster analysis. Subtypes were identified for perfectionists with regard to perfectionistic families. Adaptive perfectionists – who perceived their families as adaptive perfectionistic – reported better psychological

outcome than other subtypes. The findings suggest that family perfectionism plays a role in psychological outcome.

School climate has been lauded for its relationship to a host of desirable academic, behavioral, and social–emotional outcomes for youth. The present study tested the hypothesis that school climate counteracts youths' home–school risk by examining the moderating effects of students' school climate perceptions on the relationship between family structure (i.e., two-parent, one-parent, foster-care, and homeless households), and academic performance (i.e., self-reported [grade point average] GPA). The present sample consisted of 902 California public high schools, including responses from over 490,000 students in Grades 9 and 11. Results indicated that, regardless of family structure, students with more positive school climate perceptions self-reported higher GPAs.

A unique curvilinear trend was found for homeless students, as the relationship between their school climate perceptions and self-reported GPA was stronger at lower levels. Overall, the moderation effect of positive school climate perceptions on self-reported GPA was strongest for homeless youth and youth (O'Malley, Voight, Renshaw, & Eklund, 2015).

Table 1. Demographic characteristics of the participants

Demographic Profile	Frequency	Percentage (%)
Age		
15-17	0	0
18-20	221	87.01
21 and above	33	12.99
Total	254	100
Gender		
Male	60	23.62
Female	194	76.38
Total	254	100
Civil Status		
Single	254	100
Married	0	0
Separated	0	0
Total	254	100
Religion		
Christianity	251	98.89
Islam	3	1.17
Total	254	100
Monthly household income (in PHP)		
10,000 and below	2	52.76
10,001-20,000	2	21.65
20,001-30,000	28	12.99
30,001-40,000	33	11.02
40,000-50,000	55	0.79
50,001 and above	134	0.79
Total	254	100
Financial provider		
Parents	219	86.22
Scholarship grant	24	9.45
Relatives	11	4.33
Self-supporting	0	0
Total	254	100
Family types		
Nuclear	153	60.24
Step	20	7.87
Cross-generational	11	4.33
Blended	8	3.15

Single-parent	34	13.39
Living alone	28	11.02
Total	254	100

Daily activities

The level of productivity of the student can be associated with their performance academically as the output. Time is really crucial since it is a limited resource. With 24 hours and 7 days a week, activities of a student may also be critical factor in the academic performance of a student. There will be trade-off in terms of managing what should be done. Their daily activities affect the way they do in their classes. Their means of transportation going to and from university, activity level, sleeping hours and leisure have been taken into account.

Means of travel

Travel time can be related with the mean of transportation one take to go their university. The availability and accessibility to these vehicles also contributes to their punctuality. More so, commuting affects personal well-being. An earlier study observed that multiple group discriminant analysis was employed to determine the utility of pre-enrolment traits and academic performance in identifying freshman students who persisted, stopped out, or withdrew early from an urban, non-residential university. An equation based on nine pre-enrolment variables significantly discriminated among the three groups and correctly identified 48.1% of an independent validation sample ($p<.001$ for the hypothesis that overall correct classification was a significant improvement on chance). The clearest separation based on pre-enrolment traits was between stop outs on the one hand and both persisters and withdrawals on the other. It was only after first-quarter academic performance was added to pre-enrolment traits that a sharp discrimination was found between persisters and early voluntary withdrawals (Pascarella, Duby, Miller, & Rasher, 1981).

Hours of sleep

Sleep is an important factor in life that is why it is advised to have eight hours of sleep to achieve a healthy lifestyle. Adequate sleep has an impact on how the mind functions, making it an important variable in a student's academic performance. For university students, the average sleep requirement should be no more than eight hours. It has been observed that shortened total sleep time, erratic sleep/wake schedules, late bed and rise times, and poor sleep quality are negatively associated with academic performance for adolescents from middle school through the college years (Wolfson & Carskadon, 2003). Also, the relationship between sleep and academic performance is directly proportional (Zeek et al., 2015).

Table 2. Daily activities of students

Daily Activities	Frequency	Percentage
Means of travel		
Private car	24	9.45
Train	98	38.59
Bus	31	12.20
Taxi	33	12.99
Public utility jeeps	94	37.01
Hours of sleep		
8 hours or more	27	10.63
5-7 hours	125	53.15
3-5 hours	64	25.20
Less than 2 hours	17	6.69
Total	243	95.67
Activity level		
Very active	M = 3.89	

NB: Hard exercise or sport activity done around 6–7 days a week

Recreational activities
As university life can be very stressful and demanding, it is equally important for a student to a take a break sometime and spend his time leisurely. Leisure is an important part in the lifestyle of a person to attain equilibrium. One research has observed that students tend to gain more benefits doing recreational activities as it motivates them on their academic performance and reduces their stress levels (Lin & Pao, 2011). It can be a coping mechanism to enable a student to rest from the workload and assignments.

Meanwhile, study of the home background of successful Asian-Americans found that specific aspects of home socialization can exert a positive effect on school adjustment and achievement. The study consisted of 90-minute structured interviews conducted with 15 Asian-American students (Harvard undergraduates or secondary school summer students--roughly equal numbers of Chinese, Japanese and Korean youth). Their families were found to motivate achievement by: (1) shaping very positive attitudes to learning; (2) underscoring the importance of the child's education by the parents' willingness to further that education by working harder to provide tutoring, moving into better school districts, etc.; (3) indicating high achievement expectations for the child and encouraging perseverance; (4) strictly controlling homework and recreational time; (5) providing accelerated exposure to the basic school curriculum prior to and outside of school; (5) encouraging children to deal with conflicts in a non-confrontational manner that encouraged self-control and increased concentration on academic work; and (6) excusing the child from daily household chores and economic contributions to the family unless doing so was essential. A de-emphasis on verbal activity was also found. The findings lend support to two theoretical trends in explanations of school achievement: the helplessness hypothesis and the home influence hypothesis (Mordkowitz & Ginsburg, 1986). Dennis Relojo, the world's first blog psychologist advocates that blogging is an excellent outlet to motivate students in order to improve their academic performance (Relojo, 2017).

Dietary habits
Epidemiologic research has demonstrated that poor diet and lack of adequate physical activity place children at risk for being overweight and obese and thus influence future health status. Additional research has also shown that children and adolescents whose diets are nutritious and whose participation in physical activity is high tend to perform better on various measures of cognitive performance and academic achievement (Sigfúsdóttir, Kristjánsson, & Allegrante, 2007).

Not only children, but even teenagers can be victims of hunger since it disregards the age of its prey. The number of times they eat, what they consume, or whether they take vitamins and supplements can contribute to their physical health and may have implications to their academic performance.

Having three meals a day is very important to sustain the nutrition in the body so that the brain can function well.

Table 4. Meal intake of university students

Meal Intake	Frequency	Percentage (%)
3 meals	166	65.35
2 meals	41	16.14
1 meal	13	5.12
Skipping meals	20	7.87

Food intake

It is not enough to know how many meals they have. It is also important to know what they usually eat. The nutritional content of the food is also a factor. There should be a conscious effort to know what you eat and what it can do to your body. Assessing the nutrition factors can most influence academic performance. Poor diet can lead to lower academic performance.

Table 5. Food choices of university students

Food	Frequency	Percentage (%)
Fish	219	86.22
Pork	230	90.55
Chicken	214	84.25
Vegetable	192	75.59
Pasta	173	68.11
Ready meals	169	66.54
Street foods	149	58.66

Fluid intake

Fluid intake in the body is equally important. The body is made up of 75% water. It is also recommended that one should take eight glasses of water. Water (90.94%) is the most common drink among the participants followed by fizzy drinks (82.69%) and juice (80.71%).

Table 6. Fluid intake of university students

Beverage Choice	Frequency	Percentage (%)
Water	231	90.94
Fizzy drink	210	82.68
Coffee	192	75.59
Tea	170	66.93
Milk	205	80.71
Juice	188	74.02
Energy drinks	135	53.15
Beer	41	16.14
Wine	34	13.39

Vitamin intake

Almost half of the respondents take vitamins or food supplements. These help provide additional nutritional benefits in the body that could help them perform better in class. It may contribute in how they do in their daily activities.

Table 7. Fluid intake of university students

Supplement pills	Frequency	Percentage (%)
Vitamins	121	47.64
Food supplements	15	5.91
Medicines	1	0.39
Herbal preparations	0	0

Academic performance

Pharmacy is never an easy programme. It demands conscious effort of the student to get through and pass it. Their academic performance is reflected through their general weighted average (GWA). Table 8 shows the GWA of the respondents. All of the respondents have GWA above 3.0 which is the borderline to a failing mark. Most of the students lie on the range of "very satisfactory" and "satisfactory" with 34.65% and 36.22%, respectively. This shows that the students perform satisfactorily in the class.

In lagged models, as proposed by Jyoti, Frongillo & Jones (2005). Food insecurity was predictive of poor developmental trajectories in children before controlling for other variables. Food insecurity thus serves as an important marker for identifying children who fare worse in terms of subsequent development. In all models with controls, food insecurity was associated with outcomes, and associations differed by gender. This study provides the strongest empirical evidence to date that food insecurity is linked to specific developmental consequences for children, and that these consequences may be both nutritional and non-nutritional.

Table 8. Academic performance of the students

GWA	Frequency	Percentage (%)	Verbal Interpretation
1.00	0	0	Excellent
1.25-1.50	40	15.75	Superior
1.75-2.00	38	34.65	Very satisfactory
2.25-2.50	92	36.22	Satisfactory
2.75-3.00	17	6.69	Barely satisfactory
3.50-4.00	0	0	Conditional
5.00	0	0	Unsatisfactory

3. Discussion and Conclusion

Family is the best support system available for students. Nevertheless, as explained by Song and colleagues (2015), achievement pressure from teachers had the same predictive relationships but was weaker in strength. Perceived emotional support from teachers was not as effective as that from parents in predicting adolescent motivation achievement; however, perceived academic support from teachers was helpful for adolescents in predicting stronger mastery goals. Support from peers worked as a buffer against maladaptive motivation, predicting weaker performance-avoidance goals and lower test anxiety. Mastery goals mediated the relationship between social support and academic achievement, whereas performance-approach goals and performance-avoidance goals mediated the relationship between social support and test anxiety. The same patterns emerged consistently for all three years at middle school.

The students' academic performance was satisfactory to superior level. However, one finding suggest that The findings strongly suggest that: (a) students of different education levels (from school to university) are chronically sleep deprived or suffer from poor sleep quality and consequent daytime sleepiness; (b) sleep quality and quantity are closely related to student learning capacity and academic performance; (c) sleep loss is frequently associated with poor declarative and procedural learning in students; (d) studies in which sleep was actively restricted or optimized showed, respectively, a worsening and an improvement in neurocognitive and academic performance.

These results may have been related to the specific involvement of the prefrontal cortex (PFC) in vulnerability to sleep loss. Most methodological limitations are discussed and some future research goals are suggested (Curcio, Ferrara, & De Gennaro, 2006). Based from the data gathered, it can be concluded that students still manage to achieve a balanced lifestyle.

More importantly finding from this research could be shared to a wider audience, especially through blogging. As Relojo (2017) puts it blog psychology is a sub-branch of the discipline that attempts to apply psychological principles and research in order to optimise the benefits that readers can derive from consuming blogs. Potential theories of blog psychology may incorporate the readers' perception, cognition, and humanistic components in regards to their experience to consuming blogs. It could also explore a range of psychological principles involved in running blogs.

For the next researcher, it is recommended to focus on the pairing process of their academic performance per academic term to compare and analyse the relationship of the students' academic performance to demographic characteristic, lifestyle practices

and personal perception. Also, as suggested by early monitoring of students' self-efficacy and their use of learning strategies after admission is recommended with the goal of developing early intervention programmes for students whose achievement difficulties might be attributed to these factors.

References

1. Carroll, C. A. & Garavalia, L.S. (2004). Factors contributing to the academic achievement of pharmacy students: use of the goal-efficacy framework. *American Journal of Pharmaceutical Education 68* (4), 88. https://doi.org/10.5688/aj680488

2. Charupatanapong, N., McCormick, W. C., & Rascati, K. L. (1994). Predicting academic performance of pharmacy students: demographic comparisons. *American Journal of Pharmaceutical Education*, *58*(3), 262–268. https://doi.org/10.1300/j060v04n01_04

3. Curcio, G., Ferrara, M., & De Gennaro, L. (2006). Sleep loss, learning capacity and academic performance. *Sleep Medicine Reviews*, *10*(5), 323–337. https://doi.org/10.1016/j.smrv.2005.11.001

4. Davis-Kean, P. E. (2005). The influence of parent education and family income on child achievement: the indirect role of parental expectations and the home environment. *Journal of family psychology*, *19*(2), 294–304. https://doi.org/10.1037/0893-3200.19.2.294

5. Gallagher, C. T. (2011). Assessment of levels of moral reasoning in pharmacy students at different stages of the undergraduate curriculum. *International Journal of Pharmacy Practice*, *19*(5), 374–380. https://doi.org/10.1111/j.2042-7174.2011.00121.x

6. Jyoti, D. F., Frongillo, E. A., & Jones, S. J. (2005). Food insecurity affects school children's academic performance, weight gain, and social skills. *The Journal of Nutrition*, *135*(12), 2831–2839. https://doi.org/10.1093/jn/135.12.2831

7. Lin, T. C., & Pao, T. P. (2011). Leisure activities selection and motivation. *International Journal of Academic Research in Business and Social Sciences*, *1*(3), 308–320. https://doi.org/10.1080/11745398.2015.1060579

8. Mordkowitz, E.R. & Ginsburg, H.P. (1986, April). *The academic socialization of successful Asian-American college students.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

9. Nadasen, D. D., & List, A. (2016). Using community college prior academic performance to predict re-enrollment at a four-year online university. *Online Learning*, *20*(2). https://doi.org/10.24059/olj.v20i2.800

10. O'Malley, M., Voight, A., Renshaw, T. L., & Eklund, K. (2015). School climate, family structure, and academic achievement: A study of moderation effects. *School Psychology Quarterly*, *30*(1), 142–157. https://doi.org/10.1037/spq0000076

11. Pascarella, E. T., Duby, P. B., Miller, V. A., & Rasher, S. P. (1981). Preenrollment variables and academic performance as predictors of freshman year persistence, early withdrawal, and stopout behavior in an urban, nonresidential university. *Research in Higher Education*, *15*(4), 329–349. https://doi.org/10.1007/bf00973513

12. Relojo, D. (2013). Adversity quotient and spirituality quotient and their relationship to performance evaluation of the faculty members of school of science and technology (Master's thesis). Retrieved from http://ils.pup.edu.ph/

13. Relojo, D. (2015, April 07). How to communicate when you're angry [Blogpost]. Retrieved from https://welldoing.org/article/how-communicate-when-youre-angry

14. Relojo, D. (2017). Blog psychology: Insights, benefits, and research agenda on blogs as a dynamic medium to promote the discipline of psychology and allied fields. *Psychreg Journal of Psychology, 1*(2), 70–75.

15. Relojo, D., Pilao, S. J., & dela Rosa, R. (2015). From passion to emotion: Emotional quotient as predictor of work attitude behaviour among faculty members. *i-manager's Journal on Educational Psychology*, *8*(4), 1–10.

16. Relojo, D., & Pilao, S. J. (2016). Key contributions and future directions of academic social networking services for the digital academic. *International Journal of Humanities & Social Science Studies*, *2*(5), 94–101.

17. Relojo, D., dela Rosa, R., & Pilao, S. J. (2016). Reading abilities among adolescent second language readers: Theoretical, cultural and educational Implications. *International Research Journal of Humanities & Social Science 1*(4), 22–28

18. Sigfúsdóttir, I. D., Kristjánsson, A. L., & Allegrante, J. P. (2007). Health behaviour and academic achievement in Icelandic school children. *Health Education Research*, *22*(1), 70–80. https://doi.org/10.1093/her/cyl044

19. Song, J., Bong, M., Lee, K., & Kim, S. I. (2015). Longitudinal investigation into the role of perceived social support in adolescents' academic motivation and achievement. *Journal of Educational Psychology*, *107*(3), 821–841. https://doi.org/10.1037/edu0000016

20. Wolfson, A. R., & Carskadon, M. A. (2003). Understanding adolescent's sleep patterns and school performance: a critical appraisal. *Sleep Medicine Reviews*, *7*(6), 491–506. https://doi.org/10.1016/s1087-0792(03)90003-7

21. Woods, S., & Wolke, D. (2004). Direct and relational bullying among primary school children and academic achievement. *Journal of School Psychology*, *42*(2), 135–155. https://doi.org/10.1016/j.jsp.2003.12.002

22. Yang, H., Guo, W., Yu, S., Chen, L., Zhang, H., Pan, L., ... & Chang, E. C. (2016). Personal and Family Perfectionism in Chinese School Students: Relationships with Learning Stress, Learning Satisfaction and Self-Reported Academic Performance Level. *Journal of Child and Family Studies*, 1–9. https://doi.org/10.1007/s10826-016-0524-4

23. Zeek, M. L., Savoie, M. J., Song, M., Kennemur, L. M., Qian, J., Jungnickel, P. W., & Westrick, S. C. (2015). Sleep duration and academic performance among student pharmacists. *American Journal of Pharmaceutical Education*, *79*(5), 1–8. https://doi.org/10.5688/ajpe79563